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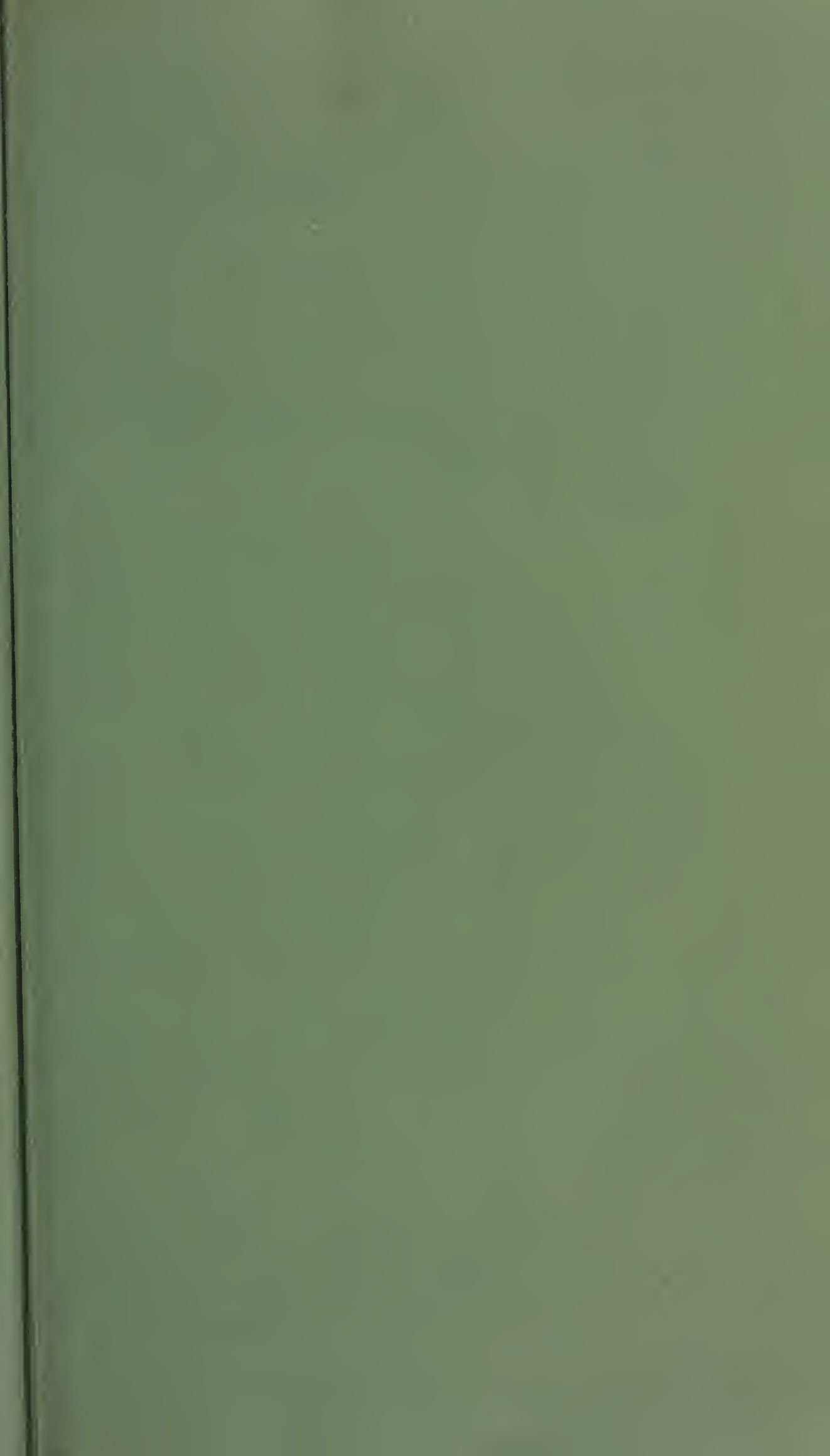
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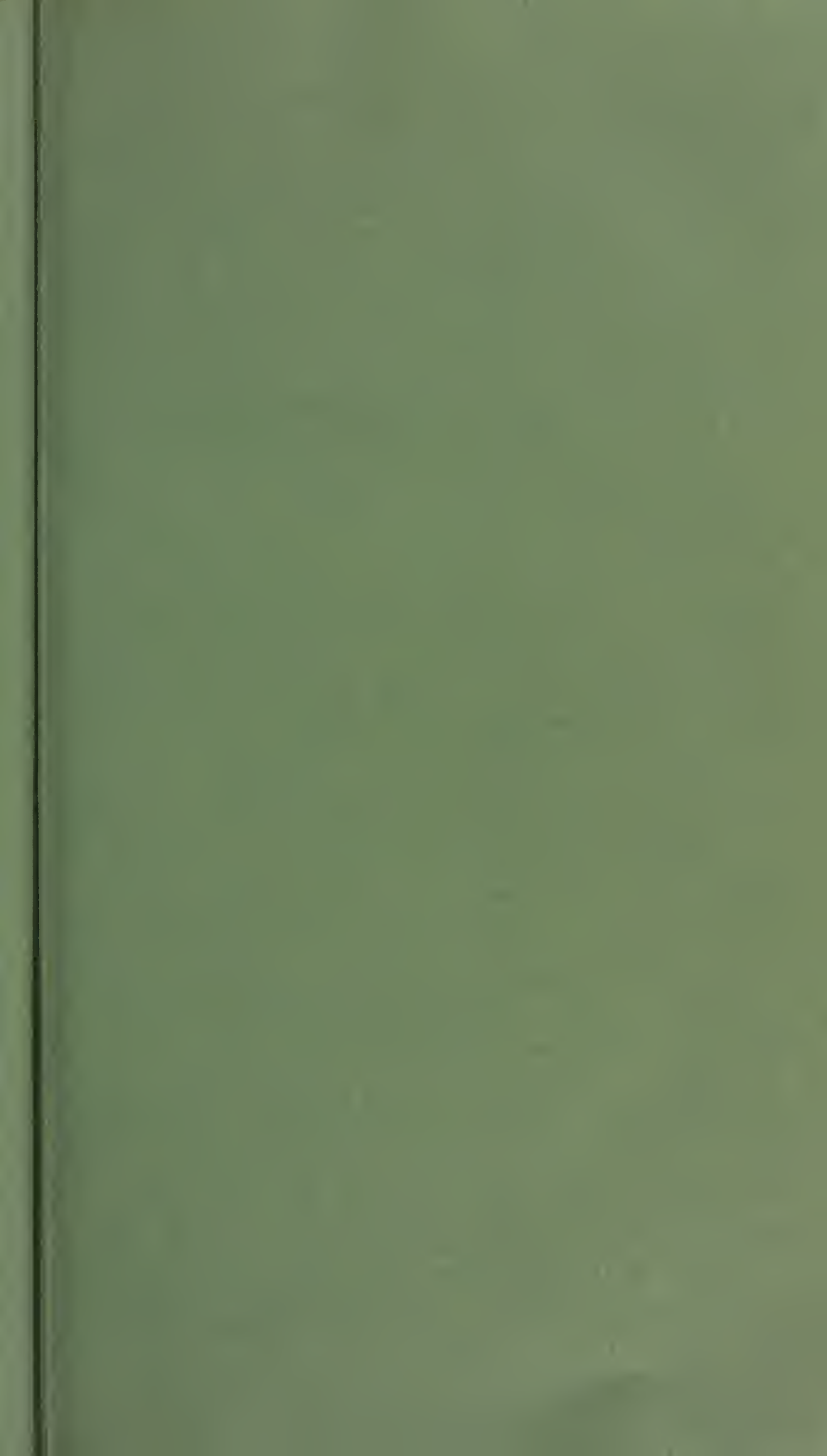
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OBSERVATIONS
ON THE
MEANS OF PRESERVING
THE
HEALTH OF SOLDIERS;
AND OF
CONDUCTING MILITARY HOSPITALS.

AND
On the DISEASES incident to SOLDIERS in
the Time of Service, and on the same DISEASES as
they have appeared in LONDON.

IN TWO VOLUMES.

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and of the Royal Society.

V O L. II.

THE SECOND EDITION.



L O N D O N,

Printed for J. MURRAY, at No. 32, in Fleet-Street; and
G. ROBINSON, at No. 25, in Paternoster-Row.

MDCCLXXX.

Feb 1872

CONFIDENTIAL

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PART IV.

OBSERVATIONS ON THE DISEASES INCIDENT TO SOLDIERS IN THE TIME OF SERVICE, AND ON

The same Diseases as they have appeared in LONDON.

CHAP. IV. OF THE CHOLERA MORBUS.

THE cholera morbus, or a sudden and violent vomiting and purging, was very frequent in July and August 1761; and several were attacked with it at Munster.— It was attended with great sickness, with pain, and inflation of the abdomen, thirst, and a small quick pulse: some had it in a

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B

pretty

2 OF THE CHOLERA MORBUS.

pretty violent degree, but in general it was mild; and although the sickness, vomiting, and purging, continued, in one or two cases, for above a day, yet none of those died whom I saw.

This disorder weakens the patient much, in a short space of time; and sometimes, when violent, kills in less than twenty-four hours. It is always most frequent in summer and in the beginning of autumn; and is taken notice of by Hippocrates, Aretæus, Celsus, and other ancient authors; and is very accurately described by many of them. — It is of the bilious kind; and the cure principally depends upon the free use of warm mild liquors in the beginning, to dilute and blunt the acrimony of the bile, and other fluids, and to promote their discharge; and afterwards of gentle cordials to support the strength; and warm fomentations to allay the pain when violent; and mild opiates to procure rest; and if the sickness or griping remains next day after the cholera is stopt, to give a dose of physic and an opiate in the evening.

An officer, who had been wounded on the 15th of July, at the battle of Fillinghausen, began afterwards to live very freely, and was
on

On the 4th of August seized in the night with the cholera.—About ten o'clock next day I was sent for, and found him in violent agony, with sharp pain in the bowels, reachings, and strainings to vomit, and spasms and cramps in the bowels, legs, and arms.—He had large red blotches on his extremities, and no pulse was to be felt at the wrist, and rather a fluttering than a beating at the heart.—He had vomited and purged much in the night before I saw him, but the purging had begun to abate.—I immediately ordered him an emollient clyster, and a saline draught, with the *confectio cardiaca*, and five drops of liquid laudanum; which, if he vomited up, was to be repeated soon after; if not, only once in four hours: and he was directed to drink freely of weak chicken broth, warm.—Two hours afterwards we found him in the same situation; still no pulse was to be felt, which prevented us from bleeding him; and the violent pain of the stomach and bowels, and the cramps, continued. We then ordered flannels, dipped in a warm emollient decoction, to be kept constantly applied to his belly, dipping them in the warm decoction as soon as they began to grow cool; his clyster to be repeated, with the addition of a

4 OF THE CHOLERA MORBUS.

drachm of the electarium e baccis lauri, and half a drachm of the tinctura thebaica; a scruple of castor, and half a drachm of spirit of lavender, to be added to each of his draughts; and a blister to be prepared, in case these medicines gave no relief.—Soon after beginning to use the fomentations, the cramps and pains began to abate; about four o'clock in the afternoon we could perceive a fluttering in the pulse at the wrist, and all the pains and cramps were much easier; so that there was no occasion for the blister.—Next morning he was very easy, but low, and inclined to be sick; for which his cordial draughts were repeated every six hours.—The third day, as he complained of a little griping in the bowels, we ordered him a dose of tincture of rhubarb, and an opiate in the evening, which entirely removed these complaints, and he was well and went abroad next day.

One soldier, who had a good deal of fever, and complained of acute pain in the bowels, along with the vomiting and purging, was blooded, and drank freely of warm barley-water while the vomiting continued.—After throwing up a quantity of green bilious matter, the vomiting ceased, and the gripes and purging

purging became less violent.—In an hour after, being able to retain some very weak broth in his stomach, he drank plentifully of it through the day; and the purging being abated towards night, he took an anodyne draught; and next day, having still a little sickness remaining, he had a dose of physic and an opiate at night, which removed all his complaints.

The rest, who were attacked with the cholera at Munster, were treated much in the same way; only as they had not such acute pain and fever as this man, it was thought unnecessary to bleed them.

The ancients * recommended drinking freely of warm water in the beginning, and the use of both cold and hot fomentations of the stomach and belly;—and in the low state, the use of wine, mixed with water, and polenta †; and to apply rue, with vinegar, and other strong-smelling things, to the nostrils; besides variety of other remedies.—When convulsions happen, Celsus ‡ advises to anoint the belly with warm oil; and if that does

* See Aretæus, lib. ii. cap. 4. and Celsus, lib. iv. cap. 11.

† The polenta seems to have been nothing but toasted barley meal. See Plinii Hist. Natural. lib. xxii. cap. 25.

‡ Celsus loco citato.

6 OF THE CHOLERA MORBUS.

not remove them; to apply cupping-glasses or mustard to the stomach; and, after sleeping, to abstain the second day from drink; and the third, to go into the bath; and if any thing of a fever remains after the cholera is suppressed, to give a purge.

Dr. Sydenham* trusts principally to drinking freely of chicken-broth, and throwing up clysters of the same, and afterwards giving opiates.

Dr. Ayton Douglas, in the sixth volume of the Edinburgh Medical Essays †, recommends a decoction of oat-bread, baked without leaven or yeast, and carefully toasted as brown as coffee, but not burnt; as a remedy very grateful to the stomach, and useful in stopping the vomiting, and sometimes the purging too: and he relates several cases where it had a good effect. After the vomiting was stopped, he added the use of mild opiates; and, where the patient was low, wine and other cordials.

In the East Indies, the columba root taken to the quantity of 10 or 12 grains, two or three times a day, has been esteemed one of the most efficacious remedies in this disorder.

* Processus integ. de cholera.

† Art. 65.

OF THE INFLAMMATORY FEVER. 7

I have never had an opportunity of trying it in the cholera, though I have often ordered it in diarrhœas attended with sickness and pain of the stomach. In some cases it had a good effect, but in many others it produced no visible change.

C H A P. V.

Of the inflammatory Fever.

ON the return of the troops from the winter expedition into the country of Hesse, in the year 1761, we had several men seized with inflammatory fevers without any topical inflammation; and at the opening of each campaign had always numbers sent to the hospitals ill of this disorder. Towards the end of the campaign, and throughout the winter, many were seized with inflammatory fevers; but these were mostly complicated, with pleuritic, or peripneumonic symptoms, or other topical inflammations, or with rheumatic complaints.

In the inflammatory fever, the sick were seized at first with cold and hot fits, succeeded by pain in the head and all over the

8 OF THE INFLAMMATORY FEVER.

body. The pulse was strong and quick, and the blood fizy; attended with other appearances commonly observed in such fevers.

As the summer advanced, this fever was often accompanied with bilious symptoms, with sickness, and vomiting of bilious matter, and very frequently with a purging; towards the end of summer it ceased in a great measure, and was succeeded by the bilious remittent fever.—And it was no uncommon thing to see those fevers, which originally were entirely of an inflammatory nature, after the sick had been some days in a crowded hospital, partake a good deal of the nature of the malignant fever, or be changed entirely into it.

We treated these fevers in the common antiphlogistic method.—We bled freely in the beginning; gave the saline draughts with nitre and other cooling medicines; and made the patients drink plentifully of small liquors:—and when they were inclined to be costive, gave mild purges, or emollient laxative clysters. We afterwards applied blisters; and if the pulse began to sink, gave cordials, wine, and other remedies commonly employed in such cases;—and towards
the

the decline of the fever endeavoured to promote such evacuations as were pointed out by nature, and likely to prove critical.

When the case was complicated with bilious symptoms in the beginning, we were obliged to have particular regard to the first passages. If the patient complained much of sickness, we gave a gentle vomit in the evening, after bleeding; and a purge next day, to carry off any bilious or corrupted humours that might be lodged in the stomach or intestines; and we found that these evacuations gave relief, and generally mitigated all the symptoms.

If at any time during the fever a looseness came on, especially when attended with gripes, we gave a dose of some gentle physic, which made a free evacuation; and an opiate in the evening after its operation; and afterwards we found it answer better to attempt rather to moderate, than wholly to stop the purging by strong astringents, and opiates; unless where the evacuation by stool was so great as to be in danger of sinking the patient.

I have found the pulvis antimonialis composed of eleven parts of the calx antimonii, and one part of the tartar emetic, given in small
doses,

10 OF THE INFLAMMATORY FEVER.

doses, was serviceable in many of these fevers, after free evacuations had been made.

Two patients, one a soldier of the 20th regiment, the other a German waggoner, were taken ill of this fever about the 25th of December, 1762 : they were both blooded freely, and had a dose of physic in the beginning, and the saline draughts with nitre and other cooling remedies, and blisters were applied without producing any considerable change in their disorder.—On the 5th of January, 1763, they both complained much of thirst, and were inclined to be costive ; their tongues were parched, their pulses quick and small, and their skins dry ; they were restless at nights, and the soldier had a slight delirium.—I ordered each of them four grains of the pulvis antimonialis every four hours.

6th. Next day the soldier told me, he had had four loose stools ; his senses were much clearer, the pulse calmer and slower, and he said he found himself lighter and easier, and less feverish, than he had been since he was first taken ill. The medicine was continued, with the addition of an anodyne draught at night.—7th. I found him in a fine breathing sweat, and he told me he had slept well in the
night :

OF THE INFLAMMATORY FEVER. II

night: p. 2 The sweat continued till next morning, and on going off his urine let fall a copious white sediment, and left him free from fever; after which he mended daily.

The waggoner, after taking the third dose of the powders, had a warm moisture upon the skin.—On the 6th was cooler and without much fever, and had had one stool.—7th. The warm moisture ended in a profuse sweat, which carried off the fever, and he continued to recover daily.

A medicine similar to the antimonial powder just mentioned, but with the addition of a small quantity of mercury, is the late Dr. James's fever powder, so much used in fevers in late years.

The receipt of it given in upon oath to the patent-office by the late Dr. Robert James, which is inserted in the rolls of the court of chancery is as follows.

Receipt of Dr. James's Powder.

“ Take antimony, calcine it with a con-
“ tinual protracted heat in a flat unglazed
“ earthen vessel; adding to it from time to
“ time a sufficient quantity of any animal
“ oil

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“ oil and salt well dephlegmated, then boil
“ it in melted nitre, for a considerable time,
“ and separate the powder from the nitre
“ by dissolving it in water.

“ Then take quicksilver, make an amalga-
“ ma, with equal parts of martial regulus of
“ antimony and pure silver, adding a propor-
“ tionable quantity of sal ammoniac ; di-
“ still off the mercury by a retort into a glass
“ receiver ; then with this quicksilver make
“ a fresh amalgama with the same ingre-
“ dients ; distill again, and repeat this ope-
“ ration nine or ten times ; then dissolve this
“ mercury in spirits of nitre, and put it into
“ a glass retort and distil to dryness ; calcine
“ the caput mortuum, till it becomes of a
“ gold colour ; burn spirits of wine upon it
“ and keep it for use.

“ The dose of these medicines is uncer-
“ tain, but in general thirty grains of the
“ antimonial powder, and one grain of the
“ mercurial, is a moderate dose.”

Signed and sworn to by

ROB^t. JAMES, M.D.

This powder produces effects similar to
the antimonial one just before mentioned ;
in small quantity it proves diaphoretic ; in
large

large it vomits, or vomits and purges, and promotes sweat. And it is most apt to act as an emetic and purge when it meets with any thing acid in the stomach and bowels.

And sometimes the mercury in Dr. James's powder takes to the mouth, and brings on a salivation, of which I have heard a number of well-attested histories, even of late years after Dr. James had said that he omitted the mercury in its preparation.

From the addition of the mercury, Dr. James's powder is alledged to act freer as a purge when given in large doses, than the other antimonial medicines, which have no mercury joined to them. I have found it to be a good medicine in the beginning of fevers where the strength was not exhausted for emptying the stomach and bowels of bilious and corrupted feculent humours, and for promoting the secretions; but, in my opinion, it is not preferable in most cases to the tartar emetic, the kermes mineral, or other antimonials in common use.—It certainly possesses no specific virtue for the cure of fevers; nor did ever Dr. James himself trust to it for this purpose, but to the Peruvian bark; for the doctor was of opinion, which he frequently professed to me, that all
fevers

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fevers were of the intermitting kind ; and that after the first passages were cleaned, that the bark was the only remedy ; and that if a fever was curable, that it was by it alone that it was to be cured.

The doctor used to give his own powders in the following manner, as I have often seen myself, and have been told by other physicians and apothecaries who have attended patients with him.

When he came to visit a person in a fever, if he found that care had been taken to clear the first passages before his arrival, he then gave what he called his mild powder, which was either a little calx of antimony, or powder of crab's eyes, or some such inert substance ; for he laid it down as a rule, that the patient must take something under the name of James's powder, that in case of a recovery the cure might be attributed to his powders.

But if he found that the patient had neither been vomited nor purged soon before he was called in, he gave his strong powder, that it might both vomit and purge ; and if it did neither, he ordered a dose of the Rochelle salts, and so soon as they operated he began giving the bark in large and repeated doses,
and

and continued its use through the fever, seldom joining any other medicine to it except the camphorated julep, and applying cataplasms to the soles of the feet; and such an opinion had he of the efficacy of the bark, that I have seen him obstinately continue its use where the tongue was parched and dry, and the fever continued growing daily worse, till death put an end to the disorder.

Dr. James gave his powder to clear the first passages of the patient, and to put money into his own pocket; but the Peruvian bark he ordered to cure the fever.

Although I think Dr. James's powder a good medicine when properly used, yet I cannot help observing, that it has often done a great deal of mischief; for I have known several instances, where it has been given in putrid ulcerated sore throats; and in low fevers, and brought on such a purging as to hurry the patients to their graves in a short time. And, indeed, people ought to give active antimonial medicines with great caution in low or putrid fevers, or when the strength is already much exhausted.

The dose of the powder in Dr. James's own receipt is said to be about thirty grains, but I have often seen five grains both purge
and

16 OF THE INFLAMMATORY ANGINA, &c.

and vomit freely; and for the most part twenty grains proves both a strong emetic and purge.

C H A P. VI.

Of the inflammatory angina; or, sore throat.

MANY of the soldiers during the campaigns were seized with inflammations of the throat, especially when the nights were cold and moist after warm days; and when they did duty in cold wet nights in the winter season.—

They were treated in the antiphlogistic method.—The patients were bled liberally in the beginning—took the cooling nitrous and saline medicines—gentle diaphoretics and purgatives—and used frequent gargarisms.

Sometimes a flannel rubbed with camphorated oil, or the linimentum volatile, and applied round the neck, was of service.—And frequently after bleeding sufficiently; where the breathing or swallowing was difficult, the application of a large blister to the neck gave speedy relief.

All the sore throats which I saw in Germany were of an inflammatory nature. I did
not

not meet with one of the malignant ulcerous kind, which has been so frequent of late years in this country.

C H A P. VII.

Of the Pleurisy.

THE pleurisy, or an acute inflammation of the side, was most frequent among the soldiers towards the latter end of the campaigns; though some were attacked with it at all times of the year, from doing duty in cold and wet weather.

We followed the antiphlogistic method of cure; and ordered plentiful bleeding in the beginning, till the violence of the pain began to abate, or the patient grew faint;—and the side to be fomented with flannels dipped in warm emollient decoctions, and afterwards rubbed with volatile liniments: at the same time the patient drank freely of warm diluting liquors, as barley-water, the pectoral decoction, and such like; and took the saline and other cooling medicines, mixed occasionally with sperma ceti, or some other soft pectorals, if there was a tickling cough.—When the patient was costive, we gave a dose

of salts, or some other mild physic, or laxative clysters.

If the pain continued very acute, we repeated the bleeding as often as necessity seemed to require, and the pulse could bear; and immediately after the second bleeding ordered a large blister to be applied to the part affected.

Physicians formerly used to forbid bleeding after the fourth day, if it had been omitted so long; but when no symptoms of suppuration had already appeared, on whatever day of the disorder it happened, I ordered plentiful bleeding, the same as in recent cases; and never found any disadvantage, but often great service from this practice.

When the sharpness of the pain was gone, and the pulse became soft, very often a dull pain remained for some time in the part.—In some cases a brisk purge removed it;—in others, cupping the part, and afterwards rubbing it with the volatile liniments, did service;—in others, gentle opiates at night, especially where there was a tickling cough, gave relief;—and in one or two cases, this pain did not go away, till the patient drank every day for some time, a quart of the decoction of sarsaparilla with the antimonial wine.

In

In the course of this disorder, if a kindly moisture broke out on the skin, which gave relief, this was encouraged by the use of mild warm liquors; or if the patient began to spit up a viscid or yellowish mucus, we endeavoured to keep up the expectoration by the use of mild pectorals; and if a purging came on, we were careful not to check it too soon, unless it was so violent as to be in danger of sinking the patient.

When an inflammation of the side came to suppuration, which happened in one or two cases at Osnabrug, in May 1761, an incision was made in the part, as soon as a fluctuation of matter was to be felt; after which the sore healed kindly, and the patients recovered †. I am persuaded, was this operation oftener performed, many would recover who die consumptive.

† Dr. Mead advises, where the lungs and pleura grow together, and an abscess forms, to open it with caustic; and afterwards to keep the ulcer open during the patient's life: for he says, he has often seen, where such sores are healed up, that the patient died soon after by an efflux of matter upon the breast. *Monita Medica*, cap. i. sect. 7.

C H A P. VIII.

Of the Peripneumony.

S E C T. I.

Of the symptoms.

THE soldiers were subject at all times to the peripneumony or inflammation of the lungs, from doing duty in cold wet weather, and from their irregular way of living; but more particularly towards the end of the campaigns, and in winter.

This disorder was much more dangerous and fatal than the pleurisy, especially when neglected in the beginning; for then bleeding had seldom any effect; the difficulty of breathing encreased, the patient was seized with an orthopnea, and such an anxiety and sense of suffocation, that he could not sleep; and the pulse sunk; and in these cases death only afforded relief. This we experienced in many men who had lain neglected in quarters, for two, three, four, or five days, before they were brought to the hospital.

In most of the bodies of those who died of this disorder, and were opened after death,

we

we found the lungs violently inflamed, with livid or gangrenous spots on their surface, and more or less of a watery serum extravasated into the cavity of the chest.

Three had suppurations formed in the lungs. In one, who had lain sick in quarters for ten days or upwards, before he was sent to the hospital, the right cavity of the thorax was found full of a watery serum ; and the lobes of the lungs on the same side almost entirely wasted ; and what remained seemed as if it was composed of thickened membranes, resembling those formed by the coagulable lymph, or what is called by some (though improperly) the fibrous part of the blood. The lobes in the left side seemed to be in a sound state, or at most but slightly inflamed. From the right lobes of the lungs being so much wasted, I suspected that the patient had probably laboured long under some disorder of the breast ; but I could not from enquiry obtain any information in this particular ; nor did he ever mention such a thing during the few days he lived after being brought into the hospital ; he said, he had only been ill for eight or ten days before ; but soldiers afflicted with chronic distempers, when they are seized with violent symptoms, or acute

diseases, are apt to reckon the beginning of their disorder, only from the time they are taken ill in a violent manner; and never to take any notice of their former complaints.

Another soldier, about the middle of February, 1762, remained in quarters five days after being taken ill with a pain of the breast, and a difficulty of breathing; the sixth day he was brought to the hospital in the morning, and I saw him about eleven o'clock; he then had all the symptoms of the true peripneumony, attended with a strong hard pulse. He was immediately blooded as freely as his pulse would bear, had blisters applied, and other remedies used; notwithstanding which, on the eighth day from that time, he began to throw up a purulent matter in great quantity, attended with a constant hectic heat, and fever; which sunk him so fast, that he died the tenth day, after he first began to expectorate.

On the 2d of March, a soldier, of the fifty-first regiment of foot, was brought to the hospital, with a violent pain in the left side, and a great difficulty of breathing. Upon examining him, he told me, that about two years before he had had a violent stitch in his left side, towards the lower part of the thorax; that

that ever since he had been subject to a difficulty of breathing; and at times to a pain in the side; but that he had only been seized with the violent pain and difficulty of breathing he then complained of, about five days before, occasioned by catching cold, on being billeted in a low, cold, and damp house.—His pulse was quick, the pain of his side and difficulty of breathing so great, that he could not sleep, nor lie down, but was obliged to sit constantly in an erect posture; his tongue was white and furred, and he had had no stools for three days: he was ordered to be bled immediately, and to take a dose of salts; and his side to be rubbed with the linimentum volatile. 3d. His breathing and pain of the side were easier; he had slept a little in the night, and could lie on his right side, but not on his left. He was ordered the squill mixture. 4th. His breathing was worse; he was bled a second time; had a large blister applied to his side, and was ordered to continue the use of the squill mixture. On the 5th, 6th, and 7th, he seemed easier, though the breathing was still much affected, and his pulse quick and low, attended with a hectic heat. On the 8th, he told me that his left side was swelled: on

examining, I observed a fullness in that side of the thorax; and on pressing with my fingers between the ribs, I thought I felt an obscure fluctuation of a deep-seated fluid. From these appearances, and the history of the case, I judged that there was a collection of some fluid within the cavity of the chest; and that the only means left to give relief, was to make an opening into the cavity, and so evacuate the fluid. I therefore proposed to him the operation of the empyema, to be performed immediately; which he several times obstinately refused to submit to: he allowed a seton to be put in his side, but that did not answer the end proposed: he languished six days longer; and died the 14th of March. Next day an opening was made in the thorax, in the part where the operation was proposed to have been performed; as soon as the pleura was cut through, some quarts of water rushed out. We then opened the thorax, and found still some water in the left cavity. The pericardium was thickened, and slightly inflamed, and adhered to the diaphragm; which was likewise a little thickened and inflamed in the adhering part; the lungs on that side were much compressed, and contracted by the pressure of the water; but

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on being inflated and cut, seemed in a sound state, except that they were slightly inflamed. The lungs of the right side adhered every-where firmly to the thorax, but seemed otherwise sound, having no tubercles, supuration, or other disorder, that we could observe in cutting them. The heart and blood-vessels were sound, and no other polypous concretions were observed within their cavities, but such as we find in most dead bodies; which seem to be formed of the coagulable lymph in articulo mortis. The viscera of the abdomen were in a sound state.

S E C T. II.

Of the cure.

WE treated the peripneumony nearly as the pleurisy. We bled freely in the beginning, till the breathing became easier, or the pulse began to sink; taking care not to be deceived by a low oppressive pulse, which generally rose upon bleeding. We applied large blisters; gave the mild pectorals freely, and plenty of warm diluting liquors, barley-water, the pectoral decoction, and such like; which afforded more relief than any other medicines. We gave too, saline

line purges, and laxative clysters occasionally; and in some cases ordered the steams of warm emollient decoctions with vinegar to be drawn into the lungs.

In similar cases, after free bleeding, I have seen the drawing up the steams of warm water, by means of Mr. Mudge's inhaler, to be described in next chapter, of the greatest service.

By this treatment most of them, who applied early for relief, got the better of the disorder.

When the expectoration began, the patient continued the free use of the mild pectorals, and diluting liquors; and no medicines were given that might in the least tend to stop it; other evacuations were omitted, unless where the pain of the breast, or the difficulty of breathing increased; in which case, if the pulse kept up, I ordered a vein to be opened, and a suitable quantity of blood to be taken away; no other remedy affording any relief, till this evacuation was made. Where the patient was costive, we frequently ordered laxative clysters, or a mild purge, and found them beneficial; but where no such symptoms occurred, it was best, for the most part, to omit all evacuations of this kind, after

ter a free expectoration had begun, and to trust to it for carrying off the disorder.

In some cases, where the expectoration stopt suddenly after bleeding, we gave with advantage a gentle vomit, as recommended by Dr. Huxham.

Some late authors seem to look upon the pleurisy and peripneumony as the same disorder : however, though it be true, that when the pleura is inflamed, the surface of the contiguous lungs is generally in the same state ; and that, when the lungs are inflamed, the pleura is often affected ; yet as I have frequently seen the true peripneumony without that sharp pain of the side which characterizes the pleurisy ; and upon opening the bodies of people who have died of the peripneumony, have found the lungs violently inflamed and livid, and so filled with blood as to sink in water, without the pleura being much diseased ; and upon opening the thorax of others who died of the pleurisy, have found the intercostal muscles and pleura violently inflamed, with livid spots, and only a small portion of the surface of the contiguous lungs affected ; I cannot help still looking upon them as distinct disorders, though they require nearly the same treatment,

ment, and are often complicated together. And Dr. Roup* observes, that in opening the bodies of those who died of the peripneumony, he always found the lungs in one or both sides gangrened; and if the pleura was affected, that the lungs were gangrened in that side. In April and May, 1760, Dr. Roup having opened a number of bodies aboard the Princess Carolina, at Helvoetsluys, he always found the lungs hard, and black like ink, in the sides and towards the back, and swimming in a brown serum, and sometimes without the pleura being at all affected.

C H A P. IX.

Of the cough and consumption.

S E C T I.

Of the cough or catarrh.

COUGHS were very frequent during the winter, and when the weather was wet and cold. They are often accompanied with pains of the breast, and, when neglected, obstructions, tubercles, and suppurations, are

* De morbis navigantium, pars i. cap. 1. pag. 25.

apt to form in the lungs, and the disease to end in a consumption, or phthisis pulmonalis.

When coughs are slight, guarding against farther cold, and the use of mild pectorals and warm drinks, will often remove them. And the use of gentle opiates, and afterwards the drawing in the steams of warm water into the lungs, when the patient is in bed, has been found very efficacious in removing recent catarrhus disorders, and even in the cure of many coughs of some standing.—Mr. Mudge, an ingenious surgeon at Plymouth, has particularly recommended this practice in a treatise published last year, and calls it a radical cure for very recent catarrhus coughs. He has invented a much more commodious machine, which he calls an inhaler, for drawing up warm steams into the lungs, than was ever before used.—It is a pot capable of holding a full English pint, made like the common pint porter pots, with a handle that is a hollow tube, which opens below into the pot near the bottom, and has three holes in the upper part of the handle, that open into the hollow part of it.—It has a lid or cover, in the middle of which is a hole, into which is put a flexible tube, that will

will admit the little finger, and about six inches long, with a mouth-piece of wood or of ivory; and on one side of the hole where this tube is fixed, is another in the lid, with a valve, which allows air to come out, but none to go in.

When this machine is to be used, about three quarters of an hour before the patient is to go into bed, he, if an adult, is to take three drachms (or three tea-spoonfuls) of the elixir paregoricum; and if ten years of age, two; and if six, only one; each drachm containing about a quarter a grain of opium. And when he goes into bed, the inhaler is to be filled three parts with warm water, (nearly boiling) and being wrapped up in a napkin, so that neither the holes in the top of the handle, nor the one with the valve in the lid, are obstructed, it is to be placed at the arm-pit of the patient; and the bed-cloaths being drawn up and over it close to the throat, the mouth-piece is to be applied to his mouth, and he to inspire and expire through it for about twenty minutes or half an hour.

When the patient inspires, the air that he draws up is obliged to enter by the three holes in the top of the handle, and to pass through

through the whole body of warm water, and is loaded with vapour before it reaches the lungs; and when he expires, the air that is thrown out of the lungs is obliged to pass out by the valve in the top or lid.

The effects of this process are,—1st, That the warm steam drawn into the lungs proves a kindly fomentation to every part of their fine aerial vesicles, to restore a free perspiration from them, and to assist in removing obstructions from their minutest vessels.—2dly, That the opiate taken before eases the cough, by obtunding the acrimony of the thin sharp rheum that falls on the lungs, and lessening the irritability of the nerves, at the same time that it proves a mild diaphoretic, while the vapour which is expired, and escapes by the valve in the lid into the bed, settles upon the trunk of the body, and produces a sweat, which extends itself to the feet and legs;—and this sweat commonly relieves the patient from the restless anxiety of a hot, dry, and sometimes parched skin, and carries off the fever attending.

By the use of this inhaler, I have found what Mr. Mudge* has said to be true, that
most

* Whoever wishes to have more information about the use of this inhaler, may consult Mr. Mudge's Treatise on the radical

most recent colds may be removed, and that it is often of the greatest use even in coughs of some standing ; only it must then be used oftener, and sometimes morning as well as evening, but without the opiate.—The using the inhaler does not prevent bleeding, or taking medicines which the case may seem to require ; for in general, it seems to me to assist the operation of these other remedies.

When the patients complain of a pain and tightness about the breast, it is in general right to take away more or less blood ; and after bleeding, to give some of the mild pectorals, such as the sperma ceti or oily mixtures ; and, if a fever attends, to join the use of nitre, or of the saline or Mindereri draughts ; and if a tickling cough is troublesome, to give frequently a tea-spoonful of some oily or mucilaginous linctus, acidulated either with the spirit of vitriol, or the oxymel scilliticum. And in all coughs and obstructions of the lungs, the free use of soft mild liquors, such as barley-water, balm-tea, linseed-tea, or of such others, is of service. The mild diaphoretics, such as the Mindereri draughts, given along with warm drinks, to

dical and expeditious cure for a recent catarrhus Cough.
Published at London, 1779.

promote

promote a free perspiration, or sweat, are of advantage, when patients keep in bed, and lie in wards which are warm and comfortable.

If the cough and pain of the breast are not relieved by these means, the patient must be bled a second time, and a blister applied to the side immediately after, which often removes most of the complaints. If there is a shortness or difficulty of breathing, the squill mixture, or lac ammoniacum, with oxymel, and occasionally gentle purges, are of use: and if at any time of the disorder the tightness and pain of the breast returns violent, we ought to take away some blood, no other remedy affording relief; for where coughs are attended with a pain of the breast, and a difficulty of breathing, generally the lungs are more or less inflamed, and repeated bleeding is required; if it is neglected at such times, suppuration often follows soon, and an incurable consumption is the immediate consequence.

When there was little or no fever, and a thin rheum kept up a tickling cough, nothing had a better effect than to add some drops of the tinctura thebaica, or some of the elixir paregoricum, to the oleagenous or

squill mixtures ; or to give an opiate draught or pill at bed-time, which eased the cough, and procured the patient rest.

It is universally known, that animal food affords a much more heating and putrescent chyle than vegetables ; and that the matter discharged from the sores of those who eat much of it is often thin and acrid ; but becomes more mild, balsamic, and healing, by living more on food of the vegetable kind ; and for these reasons physicians have long recommended to their patients, threatened with consumptive disorders, to live entirely on a vegetable and milk diet. — And I have seen more than one instance, where people who had every symptom of a confirmed consumption, recovered by living entirely almost on a vegetable diet, allowing themselves no sort of animal food, but asses milk, buttermilk, or whey, and sometimes a little cow's milk ; and eating only roots, greens, and plenty of ripe fruit, with bread, sago, water-gruel, or light preparations of such other vegetable substances. — For these reasons, when a cough continued long, or was very violent, we kept the patients on low diet, and in as free and pure an air as the nature of the hospitals would admit of ; for we often found that

that those men who laboured long under obstinate coughs, which threatened consumptions, in small crowded wards, recovered surprisingly on being removed to a freer air; of which we had a remarkable instance in the hospital at Bremen, in January 1762, upon removing some men, afflicted with very bad coughs, out of small wards which were damp, into one large one, which was dry and airy.

When the weather was mild and fair, we made the patients walk out a little in the day-time; for we observed, that remaining always in the hospital, and breathing nothing but a foul air, helped to increase the disorder.—When we knew the men to be sober, and not apt to commit irregularities, we used to procure them good billets, and make them come daily to the hospital for their medicines.

Equal parts of lime-water and milk, drank to the quantity of a quart a day, was of use to some; and the *infusum amarum*, and other gentle bitters, taken to the quantity of an ounce or two, morning and evening, to others*.

A de-

* Asses milk, and Bristol and Seltzer waters, which are found so serviceable in pulmonic disorders, could not be had in

A decoction of the cortex removed some coughs which had continued for a considerable time, even in cases where slight hectic symptoms had already appeared*; I have seen many similar cases in private practice. The bark is of most use where

the military hospitals; and riding on horseback was too expensive a remedy for a soldier.

In chronic cases, where we suspect obstructions and tubercles to be formed in the lungs, which have not already come to suppuration, Dr. Russel recommends the use of sea-water for resolving them; but we were at too great a distance from the sea to try this remedy. See his Treatise on Sea-water, p. 17.

* Mary Sheppard, a woman twenty-six years of age, was admitted into St. George's hospital the 6th of June, 1759, for a cough, attended with a constant hectic fever and night-sweats, which had begun in the month of April, after the measles. She complained likewise of having the fluor albus, and she had been blooded more than once before she came to the hospital. I at first gave her some of the mild pectorals, and a solution of white vitriol in water, *utenda pro inject. uterina*. After a week, finding no alteration in her complaints, I advised her to become an out-patient, and to go down to her friends in the country, to live upon a milk diet, to take gentle exercise, and continue the use of her medicines; which she did, but without any alteration in her disorder, till the 6th of July, when I ordered her to take thrice a day two ounces of the decoction of the cortex, along with a saline draught. Immediately, on beginning to use this medicine, her disorder took a favourable turn; her fever and night-sweats left her, her cough became easier, and she recovered health and strength daily. She came to the hospital the 15th of August, seemingly in good health, to return thanks for her cure.

there

there are no confirmed obstructions, but the vessels much relaxed; which we judged to be the case from the patient's having no fixed pain, nor the breathing much affected. If the sick are plethoric, or in the least feverish, some blood ought to be taken away before we begin the use of this medicine.

S E C T. II.

Of coughs with hectic fever and consumption.

WHEN coughs continued long, attended with pain in the side, difficulty of breathing, and hectic fever and night-sweats, we always had reason to suspect that suppurations in the lungs were threatened, and that the disorder would terminate in a confirmed consumption. In such cases, the principal thing to be done is, to keep the patients cool; and to endeavour to allay the hectic heat and fever; and to retard, as much as possible, the progress of the disorder. When consumptive cases are recent, we are sometimes so lucky as to make a cure; but after they are confirmed, they for the most part end fatally.

To answer the purposes above mentioned, we kept the patients upon a low diet; and

wherever milk was to be got easily, we allowed them a pint a day, which was either mixed with water and given for drink, or they took it to breakfast or supper.—Their common drink was either barley-water or the pectoral decoction; which was occasionally acidulated with a few drops of spirit of vitriol; and we gave at the same time the cooling medicines, such as nitre, the saline or Mindereri draughts, mixed at times with sperma ceti, or some other of the mild pectorals.

Whenever the pain of the breast was troublesome, or the patient was hot and restless at nights from the hectic fever, the opening a vein, and taking away from four to eight ounces of blood *, gave the greatest relief of any thing we tried; and these repeated small bleedings were so far from wasting the patient's strength, that they rather seemed to prevent its being exhausted so fast as otherwise it would have been, by allaying the force of the fever.

* This practice has been strongly recommended by Dr. Mead, in his *Monita Medica*, sect. x. and by an anonymous author in the *Edinburgh Medical Essays*, vol. IV. art. 28. and Dr. Mead says, when things have not been quite desperate, he has seen good success from it.

In private practice, a mild vegetable and milk diet, and the use of afs's milk, and drinking the Bristol waters at the wells, and Seltzer water with milk, drinking whey, or butter-milk, and eating freely of ripe fruit, are justly ranked among the most efficacious remedies; and in this country the going into the more southern, drier, and warmer climates, as the south of France, Italy, Spain, or Portugal, before the winter season comes on, or the weather sets in cold, has often been found to produce good effects: for nothing is of more use in pulmonic complaints than breathing a free pure air, that neither offends the lungs by its too great degree of cold or of heat; and I have seen several recover their health by these means, whose cases before were daily growing worse, and seemed almost desperate.—And in cases where the skin is parched and dry, the use of tepid and vapour baths is sometimes of service; of which I saw a very remarkable instance in April 1773, in a young lady, who, after catching cold, was attacked with a cough, which she at first neglected, till she had every symptom of a confirmed consumption: she was then blooded, went into the country, lived on a vegetable diet, and took variety of

medicines, without any change to the better; and when I was first called to her, her pulse beat 120 times in a minute, her legs began to swell in the evenings, she was much emaciated, had frequent and violent fits of coughing, and spit up matter which seemed to be purulent. After having ordered her different remedies, I was told that her skin felt constantly parched and dry, and I advised her the use of the warm bath, which I thought might give some relief, though she seemed so far gone in a consumption, that I expected little more benefit from its use; however, by going two or three times into the warm bath, and being sweated daily in a vapour-bath for some time, the fever went off, and she recovered her strength and appetite.

In the first stage of consumptions, Dr. Pitcairn.* has advised to give repeated doses of *mercurius dulcis*, when there is no extravasation of blood, and no ulcer as yet formed. I have seen this remedy of use in threatening consumptive cases, which were complicated with a venereal taint; but in others where there was no such taint, and where it had been administered, I rather think that it

* See his *Opera Medica*, p. 131. lib. ii. cap. xvi. § 13. *Element. Medicinæ*, Lugduni Batavorum, 1737.

did hurt, and hurried on the bad symptoms.

And the drawing up into the lungs the steams of warm emollient decoctions, of vinegar, of spiritus Mindereri, of gums, and other resolving medicines, has been much recommended in consumptive disorders, and has sometimes been of use.

Gentle exercise, particularly riding on horseback, has been universally recommended in consumptive cases, with a view of promoting the secretions and excretions, and of loosening the matter lodged in the lungs, so that it may be the more easily expectorated; and certainly it has often been of great service: however, it ought to be observed, that as exercise of all kinds quickens the pulse, and increases the motion and heat of the blood, it has sometimes done mischief when used injudiciously, or used so freely as to heat the patients too much. In general, consumptive people ought to ride, or use other exercise, at that time of the day when they are coolest and most free of fever; and they ought never to heat or over-fatigue themselves thereby.

At this stage of the disorder, we put in setons, or ordered issues, to serve as a drain to
carry

carry off the matter, and found them of advantage in some cases. When the patients complained of any fixed pain, we always made the issues as near the part affected as possible *. On the the 5th of May, 1762, a man, belonging to the eighty-eighth regiment of foot, was sent to the hospital at Bremen for an hæmoptoe, attended with a constant hectic heat and fever.—After being blooded, and using the cooling remedies without success, he had four pea-issues made in his back, and had a slight decoction of the cortex, acidulated with spirit of vitriol. As soon as the issues began to discharge freely,

* In June 1748, a servant girl came to ask my advice for a cough, attended with a constant hectic fever and night sweats, which had begun some months before, on catching cold. The matter she spit up was yellow, and had the appearance of pus; and she complained of a pain in the left side of the thorax. I ordered her the saline mixture with sperma ceti to be taken thrice a day, to lose a little blood, to drink an infusion of linseed sweetened with honey, and to have a seton put in her side at the part where she complained of pain; advising her to go home to her father, who was a farmer in the country, and to live upon a milk and vegetable diet, and ride on horseback whenever she could conveniently. She seemed so far gone in a consumption, that I scarce expected to see her again; but, in the month of December, she came to return me thanks for her cure, seeming then to be in good health. She told me, that, as soon as the seton began to discharge freely, she found relief; and mended afterwards daily, by following the directions I had given her.

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the hectic heat, fever, and spitting of blood, diminished daily ; and he recovered his health and strength in a short time. However, it ought to be observed, that although these drains are sometimes efficacious, yet, when the disease is far advanced, the mischief is generally too deep rooted for them to be of any service.

The natural balsams are in general prejudicial, and increase the hectic heat and fever ; though they were of service in some few cases, where the disorder depended on a vomica of the lungs, the matter of which was discharged freely by expectoration ; as happened in one case where the patient was very low, and had the night-sweats, but coughed up the matter freely ; on using the decoction of the bark, and the electarium e spermate ceti cum balsamo, the matter expectorated became thicker, and of a more balmy consistence, without any increase of heat or fever ; after which the symptoms became gradually milder, and the patient recovered.

Where patients expectorate freely, and there is not much hectic heat and difficulty of breathing, the bark, joined to the mild softening remedies, and a cooling diet is often of service, and assists in healing the little
exul-

exulcerations of the lungs; but where there is much heat and difficulty of breathing it had better be omitted as under such circumstances it generally does mischief, by increasing the heat and fever.

In the course of this disorder the patients often become very hot and restless, and are troubled with gripes, succeeded by a purging: these symptoms generally proceed from the absorption of matter from the lungs, and from corrupted humours lodged in the intestines, and are most readily removed by a dose of some laxative medicine, after the operation of which an opiate at bed-time is of use to procure rest.—When the first dose of physic does not stop the purging, we must repeat the opiates at nights, and in a day or two give another purge; and if there is much sickness, or load at the stomach, give likewise a gentle emetic.

If the purging still continues, we must often join the use of astringents to the opiates. In many cases, I have seen good effects from giving equal parts of milk and water boiled with rose leaves, pomegranate bark, balauftine flowers, and cinnamon, as recommended by Dr. Mead in his *Monita Medica**; it

* Sect. x. de Febr. lentis five hecticis.

serves both for food and medicine.—When opiates and astringents are given to stop the purging at its first appearance, before the bowels are emptied, they almost always do mischief; and increase the heat and fever: and although they stop the purging for a few hours, it always breaks out with greater violence afterwards.

When the sick are attacked with a shortness and difficulty of breathing, which is not relieved by evacuations, and the use of cooling medicines, and pectorals, and blisters, often nothing gives so much ease, or has such a good effect, as a gentle vomit; for it frequently removes the immediate oppression from the breast, and helps to pump up the matter from the lungs.

In the advanced state of the consumption, the cough is always very troublesome; and the sick find no relief but from opiate medicines, which, in such cases, cannot be expected to do more than give a little present ease.—As they are apt to obstruct the free expectoration, we generally mix them with some oxymel scilliticum, or tinctura foetida, which takes off a good deal of their suffocating quality.

Dr.

Dr. Barry † advises for the cure of a consumption, to make an incision or aperture into the side ; wherever there is a fixed pain attended with a weight, a hectic fever, and other symptoms of an evident suppuration : he says the pleura is thickened, and the lungs adhere at the part where they are exulcerated ; and that by the operation the pus may be evacuated, and a cure made ; and he gives several instances of the success of the operation, when performed in time.—Was this operation oftener performed in the cases here recommended, I am persuaded that many lives would be preserved which are now lost.

† Treatise on the Digestions, p. 410.

OF THE
EPIDEMICAL CATARRHAL FEVERS

OF
April 1762,—of June 1767,—and of November 1775;

CALLED
I N F L U E N Z A.

SECT. I.

Of the fever or influenza of April 1762.

AFTER a very severe winter at Bremen, the weather, from being very cold, became of a sudden extremely hot, about the 10th of April. In a few days after, many people were seized with a violent catarrhal disorder. It often began with such a cold and shivering, that many imagined at first that they were going to have agues; but soon after they were attacked with a cough, and a difficulty of breathing, and pain of the breast, with a head-ach, and pains all over the body, especially in the limbs.—The first nights they commonly had profuse sweats.—In several, the disease had the appearance of
a remi-

a remitting fever, for the two or three first days.—Many had a slight inflammation of the throat, and a hoarseness. In all it was attended with an acute fever in the beginning, and the urine was of a high colour; and when the disorder had put on the appearance of a remittent fever in the beginning, it dropt a sediment towards morning after the second day; and did the same in all, when the disorder was going off.—Some had a purging, but the greater number were rather inclined to be costive.—The cough in many was very violent; and the patients, after each fit of coughing, had reachings, or strainings to vomit, exactly resembling those which come after violent fits of the whooping cough.—At first the patients spit up only a little phlegm; but in the decline of the disorder, they expectorated freely.—The violent cough and feverishness generally continued for four, five, or six days; with others it continued longer; and some had a cough for two or three weeks after the fever left them.

This catarrhal fever seized most of the people of the town of Bremen; and there were very few of the British who escaped it; at the same time, it was epidemical in most countries in Europe.

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We treated it entirely as an inflammatory disorder, and none died who applied early for relief.—Most people recovered by one plentiful bleeding, and taking the mild cooling medicines, such as the *mixtura e spermate ceti cum nitro*, the saline or Mindereri draughts, or such like. When the fever and difficulty of breathing continued after the first bleeding, in a day or two a vein was opened a second time; and immediately after a blister was applied to the back, which commonly removed the fever, and relieved the breathing.—When the patients were inclined to be costive, a dose of physic was of service.

None of the British died, except one or two of the soldiers, who remained in quarters after being taken ill; and, instead of bleeding and living low, indulged in the use of spirituous liquors; and were not brought to the hospital, till they were in the last stage of a peripneumony.—Many of the inhabitants of the town died of this disorder, which was probably owing to want of care.

S E C T. II.

Of the catarrhal fever or influenza of June 1767.

IN June 1767, a disorder of the same kind began to make its appearance in London. The preceding winter had been extremely cold, and the spring very backward. In May and the beginning of June, the wind was mostly at east, and blew extremely cold, the mornings were sometimes frosty, and there fell a good deal of rain; but towards the 18th or 20th of June, the weather became warm and mild, when a number of people were attacked with a catarrhal disorder. It commonly began with a coldness and shivering, which was succeeded with a burning feverish heat which lasted for some hours; and then a sweat broke out, which gave relief; and from the first attack the patient commonly had a frequent sneezing, and a violent running at the nose, and a tickling cough, and often complained of a tightness and uneasiness at the breast. Commonly the sweat carried off the heat and fever, but the running at the nose and cough continued from three to ten or twelve days. And for some days after the feverishness went off, the patient

patient was apt to fall into a sweat upon the least motion, or on being heated.

The greater number of people were affected in this slight manner, and the complaint was removed by the use of the mild pectoral medicines, and drinking freely of soft diluting liquors; some cases required taking away ten or twelve ounces of blood, and others likewise the taking a dose or two of some mild physic.

But although this disorder was in general slight, yet it attacked some people in a much more violent manner, and they had all the symptoms of a strong inflammatory fever; or of a pleurisy or peripneumony, and the blood was extremely fizy, and it was necessary to bleed the patients repeated times; sometimes twice or thrice, and at other times the length of seven or eight times, and to follow out the strictest antiphlogistic method of cure.

The principal differences which I observed between this and the epidemical cold, which was frequent at Bremen in 1762, were, that this disorder did not at first seem to assume so much the type of a tertian ague; nor were the sweats on the first days so profuse; and the cough was not attended with

such a reaching or vomiting, nor with a whooping as in the year 1762.

S E C T. III.

Of the catarrhal fever or influenza of 1775.

IN the first week of November 1775, another catarrhal disorder, attended with fever of the same kind, began to appear in London, and continued more or less till the middle or end of December; like the other two of 1762 and 1767, it soon got the name of influenza.

By the middle of November it was as universal in London as most disorders of this kind generally are.

In the greater number it appeared like a common cold; but in others it began with cold and shivering, succeeded with a feverish heat and cough, a running at the nose, soreness of the throat, and heaviness and slight pain of the head, and pains all over the body, and many complained particularly of a pain and uneasiness about the breast, attended with a tightness and difficulty of breathing, and other peripneumonic symptoms.—Some had a diarrhoea, and a few complained a little of a dysuria; and there was commonly an exacerbation

cerbation of fever at night, so as in some to resemble somewhat a remitting fever; but very few that I saw this season had such distinct paroxysms as to resemble those of an ague.

In general, this disorder was over in a few days, but with others it continued longer; and with some few it ran into a continued fever; or into a confirmed peripneumony, particularly with people after the age of forty, who had been subject to asthmatic complaints.

Some died of the fever, but of these I saw none; but I saw three who died of the peripneumony, by neglecting themselves in the beginning, and not sending for medical assistance till it was too late, their disorders being so far advanced, that it was out of the power of medicine to give them any relief.— And many of the poor people who had neglected themselves in the disorder, or who had it not in their power to have medical advice, died of deep consumptions; and I saw many miserable instances of this kind in the January, February, March, and April following, among the poor who came as out-patients to St. George's hospital, who dated the beginning of their complaints from the influenza.

This disorder when mild generally went off by the use of warm diluting liquors, and

a few evacuations, in the beginning ; joined to the cooling antiphlogistic remedies, and mild diaphoretics ; and some few required the use of blisters.

In the second and third weeks of November, about 140 of the patients in St. George's hospital were attacked with this disorder, and they every one got well without any accident by the mild treatment here mentioned, which probably, was owing to their complaint being immediately attended to, and proper remedies applied ; in many of them the disorder went off by a gentle perspiration, or a profuse sweat.

The blood that was taken from most of them, threw up a white gelatinous buff ; and the blood of a few only had the strong contracted white buff with a cup-like appearance a-top, when cold.

In private practice I observed, that though one bleeding in the beginning was generally necessary, and in some few cases a second, yet that where the lancet had been used very freely it sunk the patients, and made the recovery very slow and tedious ; and therefore, except where the peripneumonic symptoms urged, and in some few cases where the fever run high, I never ordered a second bleeding.

C H A P. XI.

O F T H E R H E U M A T I S M.

THE rheumatism is one of the disorders most generally to be met with in military hospitals. There were at all times some men in our hospitals labouring under rheumatic fevers, or other rheumatic complaints; though we never had at any one time a great number; owing probably to the weather being very favourable in both the campaigns of 1761 and 1762.—It was always most frequent when the weather was wet and cold; both during the campaign, and when we were in winter-quarters.

It commonly began either, 1. With an acute fever, and pains all over the body: or, 2. With pains in particular parts, as the shoulders, legs, arms, knees, and sometimes of the side, attended with some degree of a fever.—The first was the most common form it assumed, when men were attacked with it in the field or in garrison; owing to their doing duty in cold wet weather.—The other causes generally took place when they had been formerly subject to rheumatic complaints,

and had caught cold ; or after they had been weakened and reduced low by fevers, fluxes, or other disorders.

We had but very few rheumatisms accompanied with swelling, pain, and inflammation of the joints of the knees and wrists, &c. which are so common in our hospitals about London. I did not meet with above a dozen cases of this kind, whilst in Germany with the army.

When the rheumatism began with pains all over the body, attended with a high fever, we treated it at first entirely as an inflammatory fever *. We bled freely, and repeated this evacuation often †, if the blood
conti-

* Sydenham, in treating of this disease, orders bleeding, and that to be repeated next day ; and afterwards every other day, two, three, or four times, or more, as the patients strength can bear it, and on the intermediate days to give a purgative clyster. But in young people, and those who have lived regularly, he says, that a very low diet will cure as effectually as bleeding and medicines : that the patients must live four days on whey alone, but after this may eat bread for dinner ; and on the last days for supper also ; and when the symptoms begin to abate, he allows them to eat boiled chicken, or other light food ; but says they must live every third day on whey, till their strength returns. *Process. Integr. de Rheumatismo*,

† A remark of Dr. Huxham's deserves to be taken notice of here : he tells us, that there are some kinds of rheumatisms, viz. those which come from a sharp serous rheum, which do
not

continued fizy, and the pains violent, provided the pulse was strong. When the pleura, the lungs, or any other of the viscera were affected, we bled as freely as we should have done in acute inflammations of these parts : we gave the saline draughts with nitre † ; and plenty of barley-water and other

not bear the free use of the lancet ; that plentiful bleeding does more hurt than good ; and that, in such cases, the medicines which bring out breathing sweats, and at the same time correct the acrimony of the blood, joined with gentle opiates, have a much better effect. *De Aere*, vol. ii. p. 185.

† Dr. Brocklesby, in his *Observations on Military Diseases*, recommends the use of large quantities of nitre, dissolved in water-gruel, or sage tea, (in the proportion of two drachms of the nitre to a quart of the liquor) in acute rheumatisms. He says, “ I am assured from numberless instances, that in stout young men, by taking six hundred grains (ten drachms) daily, for four or five days successively, and diluting plentifully, as before recommended, plain nitre proves the most powerful and best sudorific, in such complaints, that I have ever tried ; and this quantity, and even more, may be retained in the stomach, and pass through the course of the circulation, by only diluting properly with those thin attenuating beverages as before recommended. Such quantities, in three or four days, seldom failed wonderfully to relieve the patient, and very often to cure him entirely, by the most plentiful and profuse sweats.” See from p. 116, to p. 124.

I have sometimes given nitre in large quantities as here recommended by Dr. Brocklesby ; sometimes it was of service, but it often made the patients so sick that they were obliged soon to lay it aside.

weak

weak diluting liquors; and gentle physic once or twice a week; and afterwards applied blisters, which often relieved both the pains and fever.

After some days, if the pains still remained, we continued the saline draughts with nitre throughout the day; and in the evening endeavoured to promote a free perspiration by means of the mild diaphoretics, such as the Mindereri draughts with Mithridate, in doses frequently repeated; at the same time, the patient kept in bed, and drank freely of mild diluting liquors. Sometimes we gave twenty, thirty, or forty drops of spirits of hartshorn, in repeated draughts of warm barley-water: or a like quantity of the antimonial wine, used in the same manner: or from sixty to a hundred drops of the antimonial wine, mixed with one-fourth part of the tinctura thebaica, in a large draught of some warm liquor; which I have observed, in many cases, to have a better effect, than most other medicines used for this purpose; as it acts both as an opiate in easing the pain, and procuring rest; at the same time that it promotes a free perspiration, or a gentle sweat, to carry off the distemper.

But

But it should be observed, that, in the beginning of rheumatic fevers, forced sweats generally did hurt, and often increased both the pain and fever; and that in general we had greater success, and made speedier cures, when we did not attempt to promote sweating, till after other evacuations had been sufficiently made, and the fever had begun to abate; and that in this fever, when we did attempt to procure sweats, the milder diaphoretics, with plenty of weak diluting liquors, answered better than those of a more heating nature; though after the fever was gone, and the pains still continued, sometimes the stronger sudorifics, such as g. guaiac. and its volatile tincture, Dover's powder, and the like, best answered the purpose, and carried off the distemper, when the milder ones had little effect.

I have often observed, where sweating made no change in the distemper, that keeping up a free perspiration by means of the decoction of the sarsaparilla with the antimonial wine, or small doses of the pulvis antimonialis (gr. v.), given twice or thrice a day, removed rheumatisms, which had resisted the force of other remedies. A very remarkable instance of which I had under
my

my care in St. George's hospital, in the year 1767. A soldier of the first regiment of foot guards was admitted for a rheumatism, and his left knee was so swelled and gave him so much pain, that it was at one time judged that the limb must be amputated, in order to save his life; but the operation was delayed on account of his being much emaciated, and having a constant fever, however, by taking three times a day four grains of the pulvis antimonialis, and drinking above each dose ten ounces of a decoction of sarsaparilla, he received a complete cure in seven weeks. And a gentleman who had been for several years afflicted with a rheumatism, for which he had gone through many courses, told me, that he was cured by taking three times a day a powder composed of gr. iij. of kermes mineral, gr. iv. of camphor, and gr. x. of testaceous powder, and drinking daily a quart of a decoction of sarsaparilla, with two drachms of ginseng in it.

Sometimes the cold bath † removed pains which had not yielded to internal medicines;

† I have very often ordered the warm bath with advantage in rheumatic cases in St. George's hospital; but we had no convenience of this kind with the flying hospital in Germany.

but

but it ought to be observed, that when patients went into the cold bath while the feverishness still remained, and the blood continued fizy, or before free evacuations had been made, oftentimes, instead of giving relief, it made the disorder worse, and more obstinate*.

When the rheumatism was confined to a particular part, attended with fever, we treated it as the acute rheumatism. Fomenting the part with warm emollient decoctions, and rubbing it afterwards with the volatile, or saponaceous liniments, often gave ease; and the application of cupping-glasses and blisters frequently removed the disorder. In some cases, where the first blister did not relieve, the application of a second, and afterwards keeping up a discharge from the part by means of the epispastic ointment, carried off the pain. In others, where the mild dia-

* This I have seen many instances of, particularly in the case of Anne Walker, a woman of twenty-three years of age, who was under my care in St. George's hospital, in May, 1759. Before she came to the hospital, she had been bled, and had gone into the cold bath four times, which, she told me, had increased her pains to a violent degree; in which state she had continued for some weeks before she came to the hospital; but by being bled, and taking the cooling saline medicines, with gentle purges, and mild diaphoretics, she got well in a month's time.

phoretics

phoretics were ineffectual, sweating, with the g. guaic. or Dover's powder, and such other medicines, after the fever was gone, removed the complaints. Warm water, pumped upon the part, often removes such rheumatic pains as have resisted the force of internal and other remedies. On the 29th of August, 1759, Mary Ward was admitted into St. George's hospital for rheumatic pains of the arms, legs, and knees, attended with fever, which all yielded to evacuations, and the use of cooling medicines, mild diaphoretics, and of the warm bath, except the pain of the knee; which, after it had resisted the course abovementioned, was at last removed by pumping warm water on the part, three times a week; joined to the use of fomentations and volatile liniments. Since that time I have seen repeated instances where the warm pump had an equal good effect.

When the rheumatism was attended with inflammation and swelling of the joints, we bled freely, gave cooling purges, and the saline draughts with nitre, along with plenty of weak diluting liquors, and prescribed a cool low diet; and often leeches applied to the part gave great relief.

After

After the violence of the fever and inflammation was abated, fomenting the parts, and rubbing them with the saponaceous or volatile liniments, sometimes hastened the diffusion of the swelling; as did likewise the application of blisters *, after the inflammation was entirely gone; but it ought to be noticed, that if volatile liniments or blisters are used too soon, they will sometimes occasion violent inflammation and pain †.

Rheumatic cases of this kind are often very obstinate, and require a considerable

* Anne Ragen, a woman about thirty-three years of age, was admitted into St. George's hospital the 17th of January, 1759, for rheumatic pains of her legs and arms, and a swelling of her right knee. Free evacuations, and the use of cooling medicines, and mild diaphoretics, removed all her other complaints, except the swelling of the knee, by the middle of February, when I ordered a blister to be applied to it; after which the swelling gradually decreased, and she was discharged, cured, the 20th of March.—Rachael Hyde, a woman twenty-four years of age, was admitted into St. George's hospital the 9th of May, 1759, for similar complaints, which were removed by the same means, all except the swelling of the knee. A blister was applied, and most of the swelling went away, but returned soon after: it was at last removed by the use of the warm pump three times a week, and drinking a pint of the guaiac. decoction daily.

† I have sometimes ordered emollient fomentations and poultices to be applied to such swellings, which gave great ease to the patient; and I have seen setons or issues, made near the part affected, afford considerable relief.

length

length of time before they are got the better of ; and frequently more or less of the swelling, especially of the wrists and joints of the fingers, remains ever after ; and patients, who have once had the rheumatism in this violent degree, are always subject to relapses ; as are even those who have had the rheumatism but slightly.

Mercury † has been recommended in the cure of rheumatisms : I have sometimes found it of use in obstinate cases, but in common it does little service by itself, except where the disorder is complicated with venereal symptoms ; I have often given it, and even sometimes gone so far as to raise a salivation, where the pains were most severe in the night ; and the patient, at the same time, thought he had some reason to suspect a venereal taint, though no external symptom appeared ; sometimes it has removed all the symptoms, and at other times had no effect. Many good practitioners have recommended small doses of calomel to be given at night, and next morning a purge ; in which way, I

† Dr. Musgrave, in his treatise *De Arthritide Symptomat.* p. 30. cap. ii. sect. 10, says ; he has known a salivation, raised by mercury, cure the rheumatism.

think,

think, I have observed good effects from its use.

The bark was frequently of use in restoring the strength, and removing those rheumatic pains which remained after fevers, and other disorders; but in other cases it had little effect.

When the rheumatism continues long, and has taken deep root, Sydenham * advises to bleed from time to time, at some weeks distance; which, he says, will either entirely remove the disease, or bring it to that condition, that the remains of it will be easily extirpated by an issue, and giving some of the volatile salts in Canary wine, morning and evening. I have always observed in rheumatic cases, which continued long, that, after free evacuations, the patients received more benefit from a mild low diet, continued for some time, and the use of diluting decoctions with mild diaphoretics, while they took gentle purges once or twice a week, than from any other remedies.

I have given half an ounce of soap a day, for a considerable time, in some old rheumatic cases, in the manner recommended by

* Vide Sydenham. Opera, sect. vi. cap. 5.

the late Dr. John Clérk of Edinburgh ; and, I think, with advantage ; but have not had sufficient trials to ascertain the merits of this medicine.

Dr. Sydenham, in treating of the rheumatism, which he calls scorbutic, says, that after it had resisted bleeding, purging, low diet, and other remedies, he has cured it by giving thrice a day two drachms of an electary made of conserv. cochlear. hortens. recent. unc. ij. lujul. unc. i. pulv. ar. comp. drachm. vi. cum syrup. aurant. q. s. drinking after it three ounces of a water drawn from Brunswick beer, and some of the antiscorbutic plants.

There is no disorder which soldiers are so apt to counterfeit as the rheumatism, whenever the duty in the field is severe ; but while there is no fever or size in the blood, or other evident marks of the distemper, and the men look healthy, there is always reason to suspect imposture.

C H A P. XII.

Of the autumnal remitting fever.

S E C T. I.

Of the places where the remitting fever is most frequent.

THE remitting autumnal fever, called by the ancients συεχης, was also one of the most frequent disorders during the campaign.

This fever is observed in most countries, after the juices have been highly exalted by the heat of summer, and people are exposed to the heats of mid-day, and to the cold damps of the night. We observe it every year in the neighbourhood of London, especially among the labouring people, who work in the fields, towards the end of summer, and in autumn; but it is generally in a milder degree than in armies, where men are more exposed to the vicissitudes of the weather.

As we go farther towards the south, this, as well as other bilious disorders, becomes more frequent.

This fever is reckoned the endemic distemper of the West Indies, of the Coast of Guinea, and of other places in the torrid zone; but in those warm countries it appears in a more violent degree, makes a much more rapid progress, and proves far more fatal than in our cooler and more temperate climate. And it is observed to be always most frequent and most fatal where a country is covered with wood, or is marshy, and where there are frequent fogs, and much stagnating water, which corrupts by the heat of summer.

In January, February, and March 1761, we had none of those remitting fevers at Paderborn. In April, some few of the soldiers, on their return from the winter-expedition into Hesse-Cassel, had fevers attended with bilious symptoms; but they were rather of the continued inflammatory kind, and tending to malignant, than such as could be called remitting.

The first time that I saw much of this fever, was among the sick sent to Bilisfeld in the end of June 1761, soon after the army took the field. The remissions were short, and it partook much of the nature of the common inflammatory fever; and most of them were cured by the antiphlogistic method.

thod. A day or two before we left this place, it began to change into the malignant hospital fever, from the sick being too much crowded.

In the middle of July, about twelve hundred sick were sent to the hospital at Munster; and about one third part of them were ill of this remitting fever. It did not partake near so much of the inflammatory nature as at Bilisfield; the remissions became much more evident, and it was attended much oftener in the beginning with bilious vomiting and purging; and in some few the disorder turned to a dysentery. About eight or nine had it changed into the hospital fever, from the wards being too much crowded; and in some few the disorder terminated in regular agues. In November several were taken ill of it in the garrison of Bremen, which mostly ended in a regular intermittent, the endemic distemper of the place. Towards the end of December we had none of these remitting fevers, the disorders turning more to the inflammatory kind.

In June 1762, this fever began to appear again among the sick sent from the army to the hospital at Natzungen; and it continued to be frequent through the summer and au-

tumn ; and the greatest part of these fevers this year terminated in regular agues, mostly in tertians, and were cured by the bark ; whereas the year before very few terminated this way.

S E C T. II.

Of the symptoms.

THIS disorder in the beginning had commonly the appearance of a continued fever ; and many had a sickness and vomiting, and threw up a quantity of yellow bile, mixed with the contents of the stomach. In a few days, especially after bleeding, the remissions became clear ; though on its first appearance in June 1761, they were short, and rather obscure ; and it seemed still to partake a good deal of the nature of the common inflammatory fever, the blood being very fizy ; but as the season advanced, the remissions became more evident, and the paroxysms more like those of an ague, and the blood less fizy ; though at all seasons of the year it had some appearance of an inflammatory buff in this disorder. The sick were restless and uneasy at night, but commonly felt themselves cooler and lighter in the day-time :

time: and although they had no cold fit, as the fever came on at night, and many of them had no breathing sweat, as they became cooler and freer from the fever in the morning; yet the fits were so remarkable, that many of the patients used to say they had a regular fit of an ague every night, or towards the morning; and some few, that they had the fit every second night. As the season advanced, the remissions appeared more distinct. However, there was always a good number in whom the fever went on in a continued form, through its whole course, without any signs of remission, tho' they had all the other symptoms of this fever. In a few instances the fever, after it came to remit, changed again into a continued form.

The heat in the time of the paroxysms rose high, and several were delirious during its continuance*; but were quite sensible in the intervals, though never wholly without the fever.

At the end of July 1761, four or five were attacked with a bleeding at the nose, in the

* I did not see the delirium rise so high, nor the paroxysms so severe, as in the marsh fever described by Sir John Pringle.

time of the paroxysms, and became cooler afterwards; but it did not prove a crisis in any of them.

The urine in the beginning was commonly of a high colour, though sometimes it was pale and limpid: at first it deposited no sediment; but when the fever came to remit, there was often a small sediment after each paroxysm; and as the fever was going off, it let fall a sediment in all †.

Some at first were inclined to be costive; others had a sickness and purging; and several of those who were costive in the beginning, were in the course of the disorder attacked with a purging; and others, after some previous complaint of the stomach, were seized with both vomiting and purging. In general, after the sick continued some days in the hospital, they were inclined to be loose; which was a favourable circumstance, when this evacuation was not so great as to be in danger of sinking the pa-

† Dr. Hillary says, the symptoms of this fever in Barbadoes were much the same as those of the *συνεχης*, or continued remitting fever in England; except only that the urine in this hot climate never deposits any lateritious sediment, nor very rarely in any intermitting or any other fever, except when a crisis happens that way, *Observations on the Diseases of Barbadoes*, p. 23.

tient.

tient. Some were attacked with a dysentery.

In this, as well as in most other fevers, the sick frequently passed by stool worms of the round kind; and sometimes they vomited them up, or the worms came up into their mouth or nostrils while they lay asleep in bed; and some towards the height were afflicted with deafness, which was commonly a favourable symptom.

Most of those ill of this disorder had a yellowish colour of the countenance, which went off with the fever. It was more observable in some than in others; in general, it was slight; some few became yellow all over*; particularly one man in the hospital at Munster, who, after being seized with violent vomiting and purging, convulsions, and twitching of the tendons, and hiccup, became yellow, as in the deepest jaundice. This symptom of yellowness arises from a

* Sir John Pringle takes notice of this yellow colour or jaundice. He says, "Some grow yellow, as in the jaundice. "This was found more frequent during the first campaign than afterwards; it was unfavourable, but not a mortal symptom." *Observ.* part iii. ch. 4. — Hippocrates mentions the jaundice occurring in fevers, *Aphor.* iv. § 62 & 64; and he reckons it a favourable symptom in ardent fevers, where it happens on the seventh day. See *Book on Crises*, sect. 3.

redundancy

redundancy and absorption of bile, and is sometimes observed in other fevers as well as in this †; for while we were at Paderborn in

† Does this fever, when accompanied with this universal yellowness of the skin, approach to the nature of the yellow fever of the West Indies? As I had so few cases of this kind under my care, I cannot determine this question from my own experience; but, from the account of others, I should believe them to be very different disorders.—In the yellow fever of the West Indies, the blood appears quite loose and dissolved, without the least appearance of size, even on the first day; and the general yellowness appears on the third or fourth, with signs of a total dissolution, and gangrenous diathesis of the blood: whereas, in the remitting fever of Jamaica, which is of the same kind with the fever here treated of, Mr. Nasimith tells us; (see D. Lind's first Paper on Fevers) there is always an inflammatory diathesis of the blood. The yellowness in both depends on a redundancy and absorption of bile; but in the yellow fever of the West Indies, the bile is in a much more putrescent state, and a great part of the cure depends on the early and speedy evacuation of it.—In the yellow fevers which appeared in Haslar hospital, which are taken notice of by Dr. Lind, in his two Papers on Fevers, the blood was in quite a different state from what it is in the yellow fever of the West Indies; the blood drawn from two of these patients became covered with a thick yellow gluten, and the serum was of the consistence of a thin syrup, and of a deep yellow tinge, and tasted bitter; and in another who was bled two days before his death, it threw up the same thick yellow gluten, though the red part below was quite loose.

Of the true yellow fever of the West Indies.

According to the account given by Dr. Hume and other practitioners, the true bilious or yellow fever of the West Indies is peculiar to the hot climates, and is of the putrid kind.

in February 1761; two men were brought to the hospital in fevers, attended with this symptom.

It makes a very rapid progress, and the blood is quite loose and dissolved, without the appearance of size, even on the first day.

The most inseparable characteristics of this disease are, the sickness, and incessant yellow bilious or black vomitings, attended with an oppression, and pain about the præcordia, particularly when the hand is pressed on the pit of the stomach; the laborious and painful respiration, the yellow colour of the eyes and skin, which though a common, is not a constant concomitant symptom, and the loose dissolved state of the blood, which about the end of the third, or beginning of the fourth day, is often so broke down as to enter the smallest vessel, and pass through the emunctories into the nose, mouth, and bowels, and even by the skin where blisters have been applied.

The appearances which have been observed in the bodies of those who have died of this fever are the following: the coats of the stomach, duodenum, and ilium, have been commonly found more or less inflamed and mortified, and full of black bile; the liver large and turgid with bile, and sometimes sphacelated where it lies contiguous to the stomach; the omentum livid, and full of black blood.

At other times, few or no marks of inflammation have been observed on the stomach or contiguous parts, though the preceding fever had been attended with excessive vomitings.

The more intense the first symptoms of this fever are, and the earlier the yellow stage appears, the greater the danger, and vice versa; for if this stage keeps off till some time in the fifth day, there is room to hope for a favourable event.

The external bleeding from the emunctories is always a very dangerous symptom, yet many recover after such hæmorrhages. —But when blood is mixed with the urine, or flows insensibly from the anus, the case becomes much more dangerous; and

symptom. They were both delirious, with parched dry tongues, slight twitchings of the tendons,

and when it is vomited up of a coffee colour or black, it is for the most part a certain sign that a mortification has actually taken place.

This fever, like others of the putrid kind, generally goes off with profuse warm sweats,—sometimes it ends in scabby eruptions about the mouth, and at other times there appear small boils, from the size of a common pea to that of a horse-bean, on the breast, sides, and shoulders, or hips, which prove critical: they do not suppurate, but, like carbuncles, mortify on the top, and the sloughs separate like the eschar of an issue.

And sometimes in the beginning of the third stage, or in the course of it, one or more clusters of small florid eruptions, from four to seven in a cluster, and no larger than measles, came out on or near the pit of the stomach, and in general are sure signs of the patient's recovery.

Most practitioners now agree, that the principal intentions of cure in this fever must be to correct the too great tendency of the blood to putrefaction, and to carry off the putrid bile as expeditiously and safely as possible.

Physicians have been divided in their opinions with respect to bleeding in the beginning of this fever; some recommending free and large bleedings, and others esteeming every evacuation of this kind prejudicial; but all those practitioners I have conversed with, who have had many of these fevers under their care, agree, that though a small quantity of blood, from strong robust people, taken on the first day, when the fever runs high, is of service in allaying the too great heat and violence of the fever; yet that large or free bleeding is always in danger of sinking the patient too much, and of hurrying him to his grave; — and that, after the third day, or when the blood is already dissolved, and the pulse sunk, that bleeding is for the most part prejudicial, and had better be omitted; which
corresponds

tendons, and other bad symptoms; and one of them had a continual vomiting and purging. They

corresponds with what we observe in petechial and other putrid fevers in Europe.

As the stomach and bowels are always, in this fever, filled with corrupted bilious humours, which occasion great sickness and oppression about the præcordia, and keep up a constant vomiting, it has been one of the principal intentions to evacuate and discharge this bile, before too great a quantity of it be taken up into the blood by the absorbent vessels.—And, in order to solicit its discharge downwards, all modern practitioners have strongly recommended the early and free use of emollient clysters, which commonly procure some bilious stools after the rejection of the clyster, particularly if the vomiting is come on before the clysters are administered.

The other remedies commonly employed for cleansing the stomach and bowels of corrupted bile, and other putrid colluvies, are emetic and purgative medicines: but in this fever the stomach is so irritable as not to retain purgative or any other sort of medicines; and strong vomits have often acted roughly, and kept up an incessant vomiting, which could not afterwards be stopt till death put an end to the sufferings of the patient; and therefore most practitioners in the West Indies have now laid their use aside in this fever, and attempted to clear the stomach and bowels by repeated draughts of some mild liquor.—Some recommend green tea and simple oxymel, for this purpose; others, an infusion of camomile flowers, or of sage, or of mint, and water acidulated with a small quantity of the vegetable or mineral acids. Dr. Hume preferred a very pleasant sherbet, made with fresh limes, not too sour, which was to be drank milk-warm, or even cold, if the patient earnestly desired it, and to be drank very freely. He observed that the sick at first threw up this liquor, but those who persevered in its use commonly found, that after the first three or four draughts, every succeeding one remained longer on the stomach than that

They both died, and the body of him who had the purging was opened. All the bowels, especially

that before; so that in a few hours the intermissions between the fits of vomiting came to be so lengthened, that he could attempt giving some mild purgative medicine to empty the bowels. The medicine which he found to answer best was, two ounces of manna, and an ounce of cream of tartar, dissolved in three pints (lib. iii.) of the sherbet, which was taken by spoonfuls, or tea-cupfulls, as the stomach would bear it, till such time as it operated by stool; after which it was continued occasionally through the course of the disorder, so as to keep the belly soluble, and to procure frequent bilious stools; tho' sometimes it was changed for a tincture of rhubarb drawn in weak cinnamon water, which was given with the same intent.—The purgative medicine recommended for this purpose by Dr. Hillary was the following: *R mannae optimae sesunciam vel. unc. ii. tamarind. condit. unc. i. tartar vitiat. gr. x. solve in feri lactis præparat cum vin. Madeiriens. unc. vi. colaturæ adde tinct. fenæ, unciam dimidiam; et divide in partes iv. capiat æger unam omni hora donec laxetur alvus.* And in the course of the disorder he advises to repeat this purge as often as the patient is attacked with an anxiety, and a painful burning about the præcordia, which almost always depend on bilious corrupted humours pent up within the bowels.—When purgatives failed, clysters were injected, unless a forenews about the anus, occasioned by the heat and acrimony of the stools, prevented their being administered.

For the first two days the stomach is generally so irritable, that little more can be given, by way of supporting the patient, than at times a spoonful of Port or Madeira, warmed with one third of warm water, and sweetened with a little sugar. Dr. Hillary, at this period, says he endeavoured to support the patient's strength, and to stop the putrescent diathesis of the fluids by suitable antiseptics, of which he found the following infusion of snake-root to answer the best of any thing he

especially the colon, were tinged with a yellow bile, and had a slight degree of inflammation

he tried, and to sit easiest on the stomach.—℞. rad. serpent. Virgin. drachm. ii. croci Anglic. drachmam dimidiam, infunde per horam vase bene clauso in aq. bullientis, q. s. et dein uncias sex collaturæ, adde aq. menthæ simp. uncias ii. vini Maderiensis, uncias iv. syrup croci, vel syrup e meconio, unciam i. elix. vitriol. acidi, q. s. ad gratum saporem; misce; capiat æger cochlearia, ii. vel iii. omni hora, vel secunda quaque hora, vel sæpius pro re natâ. And to this, Dr. Hillary says, he added the use of cordials, and of strong wine-whey, as the patient became lower.

When the intervals between the fits of vomiting become longer, Dr. Hume says, then panada, salop, rice-gruel, sago, or such things, with a little wine, may be given frequently; and the subacid ripe fruits of the climate, to wit, oranges, pine-apples, chaddocks, &c. were always extremely beneficial; and by way of drink, toast and water, sherbet, barley-water, almond-emulsion, the liquor of the cocoa-nut, and such like, were most proper.

When the vomiting and oppression about the præcordia continued for twelve or fourteen hours after the yellow stage, blisters applied to both thighs were of great service; and when the sick complained much of the pain they occasioned, the vomiting often began to abate, and ceased entirely, as the irritation and inflammation increased. Dr. Hume says, he never observed blisters to produce any of the bad effects mentioned by Dr. Warren, nor did he ever see any inconvenience from their use, except when they were applied lower than the calfs of the legs, when they sometimes left ulcers which were difficult to heal; but these ulcers were always salutary, and never attended with any bad consequences.

This, like other fevers of the putrid kind, generally goes off with profuse warm sweats; and therefore when there is a tendency that way, mild diaphoretic medicines, such as a little of the spiritus Mindereri, &c. are of service in promoting it.

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mation all over their surface ; the gall-bladder was distended with a very dark-coloured bile ;

And in whatever stage of the disorder the sick are relieved, whether by sweats, by bilious stools, or eruptions, and it is evident from the vomiting ceasing, and the load at the breast being removed, and the respiration becoming easier, that the fever is giving way, it is always necessary to attempt giving the bark, to support the patient's strength, and to carry off the fever and prevent a relapse, or the sick from falling into intermitting and remitting fevers.

The bark may be given either in substance or in decoction. —Dr. Hume says, he commonly ordered an ounce of the bark, with three drachms of snake-root, to be infused in a quart of port wine, and three or four spoonfuls to be given once in two or three hours, as the stomach would bear it.—Or he made the same quantity of bark and snake-root be boiled in three pints of water to a quart, and then two ounces of strong mint-water, with a little spirit of lavender, be added to the strained liquor ; which he gave in such quantities, and at such distances of time, as the stomach could best bear it.

Dr. Mackittrick recommends a method somewhat similar to this, and mentions some few things which he thinks may be tried in the first stage of the fever.—Where the vomiting continues long, he advises the application of aromatic plasters to the stomach, and to give the saline draughts in a fermenting state ; and he thinks the use of cold water, and of the columba root, might be of service.—And he seems to think, that as the skin is parched and dry, that tepid baths would often be proper ; and he says, that Dr. Dalrymple, who was physician to the army at the siege of Carthage, in the year 1740, cured many whose cases seemed desperate, by wrapping them in blankets wetted with warm decoctions, which threw them into profuse sweats, that carried off the fever.

Both Dr. Mackittrick and Dr. Hume tried repeatedly the use of opiates in the first stage of this fever, in order to allay the violent vomitings, but without producing the least good effect,

bile; but no concretions were found in its cavity, or in the bilious ducts; nor mucus, or any other thing obstructing these passages. The surface of the lungs seemed slightly inflamed; and there was a small quantity of greenish serum in the cavities of the thorax. I could not learn the histories of these two

effect; for they always increased the patient's anxiety and uneasiness, and were thrown up almost immediately; and they both think, that while the stomach remains loaded with corrupted bile, that opiates are by no means proper, and can be of no service.

* And Dr. Hume observes, that some practitioners have recommended strongly to force sweats by means of strong diaphoretic medicines and bed-cloaths; but he says, that all attempts of this kind give great uneasiness, and always fail of success.

Mr. Blicke, in an essay on the yellow fever, published in the year 1772, says, the practitioner is sometimes called too late, and when the vomiting is so violent, that no solutive medicines, though assisted with lenient clysters, will divert the course of the humours, nor anti-emetics stop the vomiting any considerable time. In such circumstances I have ventured to give (and it succeeded beyond my expectations) 20 or 30 grains of scammony or of jalap, in an anti-emetic draught, repeating it if the patient threw it up, or if it had not in a little time some visible effect.—I was induced to try remedies of this kind from observation, that the vomiting was never violent (if any) when the patient had a smart diarrhœa, either spontaneous, or proceeding from the use of medicine; and such a diarrhœa proved very serviceable in allaying or abating all the other symptoms.—The anti-emetic draught commonly stops the vomiting till the purge passes the pylorus; it therefore, in general, answers the intention, and relieves that troublesome symptom.

men's disorders, before they were brought to the hospital ; but, from the symptoms, was inclined to believe, that the fevers had been of the malignant or petechial kind ; and that the yellow colour was only an accidental symptom of it ; for on one of the men we could perceive obscure traces of dun petechial spots on his breast and arms ; and the malignant fever was frequent at this time among the troops, and the bilious autumnal fevers had ceased long before.

I could not observe any certain critical days, or periods, when this disorder terminated.—Some, who had it slightly, got well in a few days ; with others it continued longer : some continued long feverish, and would seem cooler and freer from fever for a day or two, and then grow worse again ; and many had repeated relapses.

Neither could I observe any regular crisis in this fever. Sweat was the discharge which ofteneft proved critical. Many seemed to be relieved by a purging ; but as the greater part had a looseness after some days, which continued often through the disorder, without producing any very sudden change in the symptoms, it seemed to be a favourable circumstance ; though it seldom carried off the
fever

fever so suddenly as to be manifestly critical. The urine broke, and dropt a sediment, for the most part, as the fever took a favourable turn.

When this fever proved mortal, it commonly assumed a continued form; the tongue became parched and dry, the patient delirious, with twitchings of the tendons, hiccup, and other fatal presages; while others were seized with a violent diarrhœa, or dysentery, which sunk them irrecoverably.

S E C T. III.

Of the method of cure.

IN the beginning it is generally necessary to bleed the patients freely; and frequently to repeat the evacuation, where the symptoms require it. The blood is commonly of a florid colour, and throws up more or less of an inflammatory buff. In warm climates we must not be so free with the lancet as in our more northern latitudes. Most practitioners recommend taking away a little blood in the beginning, but disapprove of bleeding freely in these countries, unless the disorder be accompanied with violent inflammatory symptoms.

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In these fevers, the first passages are for the most part loaded with bilious humours, which, if suffered to remain in the bowels, are either absorbed, and increase the heat and fever, or bring on a violent diarrhœa; and therefore, after bleeding, it is necessary to give a vomit in the evening, and next day a dose of some gentle purge, to carry off these putrid, bilious humours; or to give a solution of two or three grains of emetic tartar, in two ounces of water, which commonly vomits freely, and gives a loose stool or two afterwards, and clears the stomach and bowels more effectually than most other remedies, and frequently opens the pores, and brings out a sweat.

In Grenada, and several other of the West India islands, on the first attack of fever or sickness at the stomach, practitioners give a vomit of this kind, and afterwards a dose of some mild purge, or some antimonial medicine, that both vomits and purges; and find that it often carries off the fever entirely, or renders it much milder than otherwise it would have been; and frequently brings about an intermission, in which they can give the bark.—And I have sometimes observed, here in England, fevers of this kind
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take a favourable turn on the exhibition of such an emetic ; and at other times I have seen every symptom become milder immediately after its operation.—But although it is often of the greatest use in the beginning of fevers, to clear the *primæ viæ*, yet I think it is necessary to mention, that the frequent repetition, or the continued use of active antimonial preparations in fevers, where the pulse is low, or the patients of a weakly constitution, is in danger of sinking the sick, and hurrying on the bad symptoms. — In the course of this disease, if the patient complains of a bad taste in the mouth, and of a nausea, attended with a foul tongue, it is often of advantage to repeat the emetic ; for these symptoms commonly shew, that the stomach is loaded with bilious or other corrupted humours.—Frequently after the operation of the emetic, the patient has some loose stools, from the gall-bladder's being emptied in the strainings to vomit. Such stools are always bilious, as are commonly those procured by purgative medicines.

And if at any time of the fever the patient is inclined to be costive, and grows hot, restless, and uneasy, we must either repeat the

purge, or give laxative clysters, for these symptoms often depend on corrupted feculent matter pent up within the bowels, and go off on their removal.—In general it is of use to keep the belly soluble through the whole course of these fevers.

In Germany, after emptying the bowels, we gave the cooling and mild diaphoretics, such as the saline and Mindereri draughts, joined occasionally with nitre, or the contrayerva powders; while we made the patient drink plentifully of warm diluting liquors; which we found to answer in general better than any other remedies: they brought the remissions to be more evident, and the paroxysms to be milder, at the same time that they kept up a free perspiration, as a means to carry off the distemper.

In some cases we gave the antimonial powder, made of one part of tartar emetic, and eleven of the calx antimonii, in small doses, from two to four grains every four or six hours. The first doses of this powder sometimes made the patient sick, and acted as a purgative, and kept up a free perspiration; at other times, it produced no visible effect. In some cases, where it was given early, it
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operated both by stool, and as a diaphoretic, and removed the fever * ; and it was of use
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* Dr. Robert Miller, one of the physicians to the army, told me in Germany, that he had given this antimonial powder with great success in the remitting fever, while the eighth regiment of foot (to which he was formerly surgeon) lay in England.—Sir John Pringle, in his fourth edition of his Observations, part iii. ch. iv. tells us, that having given a mild purge immediately after bleeding, he next morning, when there was almost always a remission, gave a grain of the tartar emetic, with twelve grains of crabs-eyes, and repeated the dose in two hours, if the first had little or no effect ; at any rate, in four hours. This medicine not only vomited, but generally opened the body, and raised a sweat. By these evacuations, the fever was sometimes quite removed, but always became easier.—This medicine he usually repeated the second or third day ; if not, he opened the body with some mild laxative, or a clyster ; and continued this medicine, till the fever went gradually off, or intermitted.—Sir John Pringle says, that Dr. Huck treated this fever in a method similar to this, both in North America and in the West Indies. In the beginning he let blood ; and in the first remission, gave four or five grains of ipecacanha, with half a grain of tartar emetic : this medicine he repeated in two hours, taking care that the patient should not drink before the second dose ; for by these means the medicine passed more readily into the bowels, before it operated by vomiting. If, after two hours more, the operation either way was small, he gave a third dose ; which commonly had a good effect in carrying off the bile ; and then the fever either went quite off, or intermitted so far as to admit the bark. On the continent he found no difficulty after the intermission ; but in the islands, unless he gave the bark upon the first intermission, though imperfect, the fever was apt to assume a continual and dangerous form. Dr Huck never varied this method, but upon a stronger indication to purge, than to vomit. In which case he made an eight-ounce decoction, with half an ounce of

in others, towards the decline of the fever; but we were often obliged to lay it aside; for it either acted too roughly, or produced no visible effect or alteration in the disorder.

In the year 1761, when the fever came to remit, we were obliged, for the most part, to continue the use of the mild diaphoretics, as before; for although the disorder put on a remitting form, the bark had very little effect in stopping it †, unless where the fever changed into a regular quotidian or tertian ague; but in the year 1762 the greater part of these fevers terminated in regular agues, and were cured by the bark.

tamarinds, two ounces of manna, and two grains of emetic tartar; and dividing this into four parts, he gave one every hour, till the medicine operated by stool.

† Dr. Hillary, in mentioning the remitting fever of the island of Barbadoes, says: in those who were bled, and took an emetic afterwards, and then the saline draughts, the fever was generally carried quite off by a critical sweat on the seventh or ninth day; in some few it came to intermit regularly after that time; and was soon cured by the cortex Peruvianus, given with the saline draughts, and seldom effectually without them; though these irregular ingeminated fevers often remitted, and sometimes seemed to intermit; yet if the cortex Peruvianus was given too soon in the disease, before it intermitted regularly (as I have more than once seen, where it had been injudiciously given), it generally caused the fever to become continual and malignant. *Observat. on the epidemic Diseases of Barbadoes*, p. 22.

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In the year 1761, we tried the bark in various forms in many cases, where the patient had been blooded and purged in the beginning, and used the cooling medicines; and where the remissions were very clear: yet it had no effect in removing the disorder, except in a few cases at Munster, where the paroxysms assumed a tertian form; for the most part it made the patients more hot and feverish, and we were obliged to leave off using it, as it was in danger of changing the remittent into a continued fever. However, it was of service after the fever came to a crisis, and was going off; it hastened the recovery, and those who used it were less subject to relapses than such as did not; and therefore we commonly gave it in a convalescent state.—Before giving the bark, I always found it of advantage to give a dose of rhubarb, or of some other purgative, or to mix some rhubarb with the first doses, so as to procure the patient some loose stools.

After having seen many of these fevers yearly for a number of years successively, I think that we cannot lay down any certain invariable rules with regard to the administration of the bark in these autumnal remitting fevers in our climate; for I have observed,
that

that in some seasons it has a remarkable good effect in putting a stop to the progress of the disease ; while in other seasons it produces no such effect, but rather seems to increase the heat and fever.—In general, the more distinct the remissions are, and the more the fevers of the season tend to perfect intermittents, the better effect the bark has.—For the most part after the necessary evacuations have been made in the beginning, and the stomach and bowels have been well emptied, if the tongue continues moist, and the pulse soft, and if the remissions are pretty strongly marked, we can do no hurt by trying the bark ; for I have often seen it given in cases where it did not put a stop to the fever, and yet seemed to invigorate the constitution, and to support the vis vitæ, till nature brought about a crisis, and even where after trying it for a day or two, we had been obliged to lay it aside.—And I never observed any bad effects from administering the bark under the circumstances above mentioned, provided, after a fair trial, it was laid aside so soon as it was found not to agree, or the fever to increase, notwithstanding its use ; though I cannot omit mentioning that I have more than once seen great hurt done by an obstinate perseverance in

in its use, where the tongue was parched and dry, and every symptom was turning daily worse.

When either the fever went on without intermission, or changed into a continued form, or the patient continued hot and feverish through the day, with a head-ach, and other feverish symptoms, nothing answered better, after free evacuations had been made, than to apply a large blister to the back ; and to make the patient drink freely of cooling diluting liquors ; which generally relieved the head, and abated the violence of the other symptoms.

S E C T. IV.

Of the treatment of particular symptoms.

WHEN a purging came on in the course of this disorder, if there was much fever, with a strong throbbing pulse, gripes, and pain of the bowels, some blood was taken away ; and immediately after the patient took a dose of salts and manna, or of rhubarb ; and an opiate in the evening after its operation : but if there was little or no fever, or sharp pain, bleeding was omitted ; and if the patient complained of sickness,

ness, a few grains of ipecacoanha were given previous to the purge.

After this, if the purging was moderate, and did not sink the patient, we did nothing to stop it; but if it was violent, we gave the Mindereri draughts with mithridate, and the chalk julep in the day, and an opiate at going to rest; and occasionally used the emollient and anodyne clyster; and, if necessary, repeated the emetic and purge.

The hiccup seldom appeared in this fever till the patient was reduced very low, and was commonly the forerunner of death. Some few, who had a purging and vomiting, were taken with a hiccup, attended with sickness, and load at the stomach, which seemed to depend on bilious humours lodged in the stomach and bowels. This induced me to give a few grains of the ipecacoanha; and to make the patients drink an infusion of camomile flowers till they vomited freely, and afterwards to take some mild purge, or use laxative clysters; after which they found themselves easier, and an anodyne draught, with twenty or twenty-five drops of the tinctura thebaica, put an end to the hiccup. Others required the use of cordial draughts, mixed with opiates; and repeated clysters
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and fomentations, before they found relief.

—The application of a blister removed the hiccup in one, after the above remedies had proved ineffectual; as did the musk julep with opium, and the application of an aromatic plaster to the stomach, in another patient.

Several of them complained of a burning heat and pain in making water; which commonly went off by drinking freely of the gum arabic decoction, with the dulcified spirit of nitre, and the use of oily draughts; though in some it required the assistance of opiates, and of fomentations and clysters before it was got the better of.

The symptom of worms we were often obliged to neglect till the fever was over, and then we treated it as formerly mentioned.

The deafness, though not near so frequent in this as in the malignant fever, was rather a favourable symptom, and mostly went away of itself; though in a few cases, where it continued long, we applied blisters behind the ears, or to the neck, with advantage.

Many, especially those who were brought low, complained, after the crisis of the fever, of restlessness, and want of sleep; which, however, went off as their strength returned:

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where it fatigued them much, and kept them low, we gave a cordial anodyne draught at night; and if that did not answer, commonly the addition of a few glasses of wine in the afternoon had the desired effect.

Others, in their convalescent state, complained of such a giddiness, and lightness of the head, that they could neither walk nor stand; others, of a dimness of the eyes. These symptoms for the most part, went off as the patients gathered strength: the use of the bark, with now and then a glass of wine, hastened the cure; and in two or three cases we were obliged to give a dose or two of some gentle physic, and to apply a blister, before the patient got the better of them.

As the sick were recovering, it was common for them to complain of pains of the shoulders, arms, and legs, which also left them as they recovered their strength; where they did not, the saline draughts, and a low diet, generally had a good effect; and where it had not, we treated them as rheumatic complaints.

When the yellowish colour of the countenance remained after the fever, we kept the patient on a low diet; and his body open by means of the saline draughts, with a few
grains

grains of rhubarb, or a drachm or two of tartar solubilis, or by giving half a drachm, or two scruples of the soap pills with rhubarb daily; which, for the most part, removed the yellowness soon. Two only had a jaundice remaining after the fever, and both were cured in a short time.

In other respects, the treatment of this fever, when it degenerated into a continued form, had nothing particular in it; nor differed from the common practice of giving cooling medicines when the fever was high, and supporting nature by the use of cordials and wine, and the application of blisters, &c. when low; and promoting such evacuation as nature pointed out for a crisis.

Mr. Cleghorn*, after giving a very accurate account of tertian fevers, as they appeared in their various forms of true, of double, and triple tertians, and of semi-tertians, in the island of Minorca, tells us, that he first attempted the cure by profuse evacuations; but afterwards learnt from experience, that they were unnecessary; and that bleeding and purging once or twice in the beginning, was all that was in general requisite;

* See Observ. on the epidemic Diseases in Minorca, chap. iii. p. 187, &c.

and

and if on the fifth day the third revolution was not attended with more threatening symptoms than the second, and the patient bore it easily, he frequently trusted the whole business to nature; which commonly terminated the fever about the fourth or fifth revolution; and for the most part with an increase of some natural evacuation.—But if the paroxysm on the fifth day was the longest and most severe that happened, attended with any doubtful or dangerous symptom, he ordered two scruples of the cortex to be given every two or three hours; so that five or six drachms might be taken before next day at noon; lest, if this interval escaped, he should not have found a favourable opportunity of giving a sufficient quantity of the medicine afterwards; as the fits about this period are wont to become double, subintrant, or continual.—This did not always put an immediate stop to the fever, but it invigorated the powers of the body, and prevented or removed the dangerous symptoms. Having given the bark on the fifth day, if a fit came on the sixth, and declined the same evening, he gave some more doses of the bark to mitigate the fit on the seventh; yet sometimes this fit of the sixth united with that of the seventh,

seventh, and the patient had the heat, restlessness, raving, and other complaints, greatly augmented, and the case seemed more desperate than ever; which, however, were more dangerous in appearance than reality, and went off with a profuse sweat next morning; after which he gave the bark freely as before; and this either stopt the fits, or made them so moderate, as that they yielded quickly to the same sort of management.—By this method, when assistance is called in time, Mr. Cleghorn says, the most formidable intermitting and remitting tertians may be certainly and speedily brought to a happy conclusion about the end of the first week, or beginning of the second.

Mr. Clerk *, in his Observations on the Diseases in long Voyages to hot Countries, and particularly on those which prevail in the East-Indies, after describing the fevers and mentioning the different remedies which he used, observes, that in the dangerous sort of them, so soon as the intestinal tube has been thoroughly cleansed, the principal part of the cure consists in prescribing the Peruvian bark in as large doses as the patient's

* See his Observ. &c. p. 144, &c.

stomach will bear, without paying any regard to the febrile remissions and exacerbations. If the remissions are distinct, the bark will have a more speedy effect; but even although the disease is continued, by its use, it is as effectually prevented from growing dangerous and malignant. The bark being antiseptic, cordial, and never suppressing any critical secretion, is well adapted for the cure of fevers in hot climates. When the stomach is weak, it ought to be given in decoction; but as soon as the patient can digest it, immediate recourse is to be had to the powder, either in the saline draught, port wine, or in any other form most agreeable. —In hot climates, he says, experience affords sufficient proof, that the bark may not only be given with the greatest safety, both in the remissions and exacerbations, but even when the disease is continual. He adds, that if after evacuations the stomach remains weak and squeamish, which is often the case in bad fevers, I have often found the greatest advantage from prescribing a full dose of solid opium. It seldom fails to remove these symptoms, and then the bark will sit easy on almost every stomach.

C H A P. XIII.

Of the Intermitting Fever, or Ague.

S E C T. I.

Of the cause of aguish paroxysms.

THIS disorder belongs to the same tribe of diseases as the remitting fever. We call it an intermitting fever, or ague, when the paroxysms are distinct, begin with a cold and hot fit, and go off with a sweat; and the patient is cool and free from the fever in the intervals between the fits.

Many have been the causes alledged to produce this disorder. The great quantity of bile that is often thrown up in the fit, has caused it to be ranked among the bilious diseases; and the seasons of the year in which it is most frequent, and the low moist situation of the places where it is endemic, have made practitioners suspect that an obstructed perspiration, and a tendency in the juices to the putrescent, are the cause of it.

But whatever cause we may suppose to give rise to the first feverish fit, it is difficult from hence to account for the regular returns of

the paroxysms and intermissions : for my own part, after considering intermittents, which observed a regular type in the course of a salivation * ; their being so easily stopt by the bark without any sensible evacuation ; their being sometimes put away by a stimulus externally applied †, or by a fright, or sudden plunge into cold water ‡ ; their returning after slight errors in diet; and sometimes by the operation of a purge, or of bleeding ; their attacking sometimes only particular parts, and many such accidents in these fevers, I must confess, that I am unable to form any idea, either of their origin, seat, or cause §.

S E C T.

* See Van Sweiten, vol. II. p. 537.

† A gentleman told me, that he was once cured of an ague in the country, by applying a poultice of garlic to his wrists, and letting it lie on till it inflamed and blistered the part.—I have seen blisters cure an ague.—In the Edinburgh Med. Essays, vol. II. Art. v. we have an account of agues being cured by the application of poultices of recent erigerum (groundsel) applied to the stomach on the days free from the paroxysm, which caused strong vomiting.

‡ See an account of an ague being cured by the patient being pushed into a pool of water without any previous notice, and being much frightened, in Mason's Account of Agues, p. 222.

§ The common account given of the cause of agues, and of the regular return of their paroxysms, has been : That the ague takes its rise from some sort of matter, bilious, or whatever

S E C T. II.

Of the seasons when agues are most frequent.

THE soldiers were subject to this disorder particularly in spring, if they took the field soon, and in autumn : the frequency of it was in a great measure determined by the nature of the ground on which they were encamped, or the situation of the garrison or town in which they were quartered ; for the lower and moister the camp or garrison, and the more moist the season, the more subject an army is to agues ; and the drier the situation of the camp or garrison, and the finer and drier the weather is, the freer they are from disorders of this kind.

In winter 1761, we had but very few agues in the hospitals ; but on the return of

ever it may be, either mixed with the blood, or lodged in the bowels, or in some other part of the body ; that a great part of this matter is thrown out of the body, in the time of the paroxysm ; but that so much remains as serves by way of a ferment to assimilate other particles to its own nature ; which, when collected in a certain quantity, produce a new fit ; and, according to the time that it takes to produce this quantity, the disorder assumes the form of a quotidian, tertian, or quartan ague.

the troops from the expedition into Hesse-Cassel, and during the spring, some (though not many) were attacked with quotidian and tertian agues, and but very few with quartans.—In July and August they were more frequent, and accompanied with more bilious symptoms. At Bremen, during the latter end of autumn, and throughout the winter and spring 1762, we had agues of all sorts, and many inveterate cases; and all this spring, and during the summer and autumn, the ague was the epidemic disorder all over Westphalia, as well as among the troops.

In London there are commonly some agues in the spring, and in the end of autumn; and a number of the lower class of people come to town every year ill of agues which they have contracted from working in the fens of Essex and of Lincolnshire, and in the hop-grounds, and lower aguish parts of the county of Kent; some years these agues, after evacuations, yield very readily to the bark, but in others it often fails, and other remedies either by themselves or joined to the bark must be tried.

S E C T. III.

Of the cure of agues.

IN spring 1761, what agues we had were mostly tertian, some quotidian, and but two or three of the quartan kind. They were, for the most part mild, and, after emptying the first passages, yielded to the bark.—Some of them began in the form of a continued fever; but after bleeding, and the use of the cooling medicines for a few days, they began to remit, and at last ended in regular quotidian or tertian agues: Others, at first, appeared in form of remittent fevers, attended with a strong throbbing pulse; but changed to regular intermittents by pursuing the antiphlogistic method of cure; and some from the beginning assumed the type of quotidian or tertian agues, but often attended with a good deal of fever, for the first two or three days; and some had a slight delirium in the time of the paroxysms, and the pulse was not quite settled in the intervals. In such cases, where the patient was strong, nothing answered so well as to take away some blood; and to give the saline draughts

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with

with nitre till the fever was moderated, before we gave the bark.

In general, there is a prejudice against bleeding in agues, after they become regular ; but I have always observed, both in England and in Germany, that where patients are strong and plethoric, and the fever in the paroxysms rises high, or the pulse remains quick in the intervals, that taking away more or less blood, and even repeating that evacuation if necessary, and giving a gentle emetic, and a dose or two of some mild purge, and the antiphlogistic cooling medicines in the beginning, eased the patient, moderated the fever, and made it safer to give the bark soon ; and I never saw the least inconvenience from the practice ; but, on the contrary, have seen several intermittent fevers change into continued ones from the neglect of this evacuation ; and have seen cases where the bark, instead of stopping the ague, rather increased the fever, till the patient was bloodied, and had pursued the antiphlogistic method for some time ; after which the bark had its proper effect, and put an end to the disorder.

As soon as these agues became regular, and the patient was quite cool, and free from any
fever

fever in the intervals, we gave the bark; which soon put a stop to the paroxysms, without the least bad consequences; but, before giving the bark, we always took care to empty the first passages by the use of emetics and purgatives, where there was no symptom to forbid their use.

In cases where the patient was weak, and the fits so violent as to make it necessary to stop the ague, before we had time to administer emetics or purgatives, we added so much rhubarb to the first doses of the bark, as procured the patient some loose stools, as recommended by Dr. Mead; which did not prevent its stopping the ague, at the same time that it answered the end proposed of carrying off any putrid humours that might be lodged in the intestines.

Mr. Cleghorn *, while at Minorca, after evacuations, gave the bark at the end of the third period, as we observed before; but where the fever had been neglected till about the third or fourth period, or badly treated in the beginning, and the bowels were inflamed or overcharged with corrupted gall, he was obliged to endeavour to palliate the

* See his Account of the Epidemic Diseases of Minorca, chap. iii. 2d edition, p. 194.

most pressing complaints, and to watch evening, night, and morning for a remission, and then immediately to fly to the bark, as the only remedy that could avert the danger. If the patient was strong, he gave half an ounce of the bark, with six drachms of the sal catharticum amarum, divided into four equal parts, of which the patient took one every two hours; the effect of which was, that the next fit was mitigated, and an intermission commonly ensued, in which the bark was repeated without the purgative, to finish the cure.—But where the patient was excessively feeble, and there was a manifest risk of his dying in the next fit, he gave cordials with the bark, instead of the sal. catharticum; and endeavoured to throw in six or seven drachms in the space of ten or twelve hours; he having found by experience, that if a smaller quantity is given, the paroxysms come on earlier than usual, and make all attempts to preserve life unsuccessful.

Sometimes, when patients are reduced low by agues, the stomach becomes so squeamish as to reject the bark in every shape it can be given; in such cases, when the ague cannot be stopped by other means, it may be administered with great advantage in clysters, of which

which the following is a very remarkable instance.—William Hadderell, a lad seventeen years of age, in the end of the year 1761, was attacked with a severe tertian ague, in which a mortification came on his left foot, and one half of it dropt off; notwithstanding, his ague continued to attack him every second day, and the sore continued running on the 12th of October 1763, when he was admitted into St. George's hospital. He was reduced extremely low; and the fore of his foot looked so bad, that it was at first imagined he must lose his leg. He was ordered some vomits, and a purge, and cooling medicines, and afterwards to take the bark freely; but his stomach rejected it, in whatever form it was given. Other means were then tried to stop his ague, but without effect, till the 7th of November, that I ordered two drachms of the powder of the bark to be given him twice a day in an emollient clyster, with half a drachm of the tinctura thebaica, which stopt his ague in three days; and he had no return of it on the 28th of January 1764, and had recruited his health and strength, and the fore of his foot was greatly lessened. The late Dr. Harvey, (who taught midwifery in London) told me,

me, that he had cured children of agues by bark clysters, after the bark waistcoats, and other means used, had proved unsuccessful. And since the last edition of this work, I have seen many instances where the bark has been given in clysters with remarkable good effects.

Dr. John Hume, and several other gentlemen who have practised in the West Indies, have told me, that in that country, when the paroxysms of the intermittent fevers run high, as they commonly do, attended with bilious vomitings, and a high delirium, that bleeding becomes absolutely necessary, and the blood is commonly fizy; and when the paroxysm is intense and long, it is likewise necessary to empty the bowels by a clyster, to encourage the free use of some acidulated attenuating beverage, and sometimes to apply blisters between the shoulders.

That the intermissions which follow these intense paroxysms are for the most part clear and perfect, but often of short duration, the fit being apt to return in five or six hours, and to degenerate into a continued fever, attended with a considerable degree of danger; and therefore it is always dangerous,
after

after the first violent paroxysm, when there is a fair intermission, to delay giving the bark, for such delays have been fatal to many. And that it is of the greatest consequence to get the patient to swallow a sufficient quantity (an ounce or ten drachms) before the return of the next fit.

And that after the fever is stopt, it is right to make the patient take a large dose of the bark twice or thrice a day, for six weeks or two months, or to take an ounce or six drachms once a fortnight, as the disorder is apt to return in four or five weeks, if such precaution is not used.

In England, vernal, quotidian, and tertian agues, frequently go off after bleeding, and taking some emetics and purges, and the saline draughts, and cooling medicines, for some time, without the use of the bark; but in Germany very few yielded to this treatment, and we were obliged to give the bark before we could put a stop to them.

In the end of July, and beginning of August, the aguish cases we had at Munster continued to be of the quotidian or tertian kind. The greatest part of them began in the form of continued fevers, tending more
to

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to the bilious kind than the preceding months; and many of the sick had bilious vomitings in the cold fits; and the agues we had in spring, and during the campaign 1762, were of the same nature, and required the same treatment.

Those cases which began in the form of continue fevers, were treated as such till they begun to have regular intermissions; they then yielded to the bark *.

SECTION.

* Since the last edition of this work, two remedies have been recommended for the cure of remitting, and intermitting, and putrid fevers, which are said to have been of use in cases where the bark had no effect. The two are, 1st, The *lignum rad. quassia*, or woody part of the root of a tree growing near Surinam in South America, which got its name from a slave who first used it for the cure of fevers, and which is described by Dr. Blom, in the sixth volume of Dr. Linnæus's *Amœnitates Academicae*.—2. The other, the flower and roots of the *arnica* or *doronicum Germanicum*, *Plantaginis folio alterum Casp. Bauhini*: and is called in English, German leopard's bane, which grows in the mountains, and flowers in summer.

1. The Quassi root is bitter, and was first known to be used as a medicine in the cure of malignant fevers, by a slave of the name of Quassi. Dr. Blom and Dr. Linnæus have strongly recommended it for the cure of remitting and intermitting fevers, and fevers with exacerbations of all sorts; and related several instances of its good effects. — It may be given in powder, from gr. x. to half a drachm for a dose, every two, three, four, or six hours. — Or a watery infusion, made with a drachm of the root infused in a pint of boiling water for an hour, may be given, from an ounce to two or three, every hour, or every second, third, or fourth hour.—And we have, in the 58th volume of

the

S E C T. IV.

Of agues complicated with the dysentery.

SOME were attended with the dysentery ; and the purging and gripes were most severe on the days of the aguish paroxysms.

In

the Philosophical Transactions, art. 12. a letter of Mr. Farley of Antigua, dated the 26th of July 1767, in which Mr. Farley says, I have lately tried the Quassi root in three or four cases where there has been a tendency to putrefaction, and the bark would not stay on the stomach, and a drachm of this root has effectually answered every purpose that the bark would ; and it has this advantage over the bark, that it does not heat the patient ; and it seems to have a good effect when joined with the radix serpentariæ Virginianæ.—Since these accounts have been published, I have frequently given it in fevers, and think that it is a good and useful medicine ; but I have not as yet tried it in agues.

2. The arnica, or German leopard's bane.—In the year 1775, Dr. Hen. Jos. Collin of Vienna published a Latin treatise on the virtues of the flowers and roots of this plant, in agues, and putrid fevers, and dysenteries and other putrid disorders. He bestows great praises on this medicine, and says that he has administered it with great success in many hundreds of cases, and found it on many occasions preferable to the bark.—The flowers he gave either in substance, or in infusion, or in extract.—In substance he gave them in the following form : R pulv. flor. arnicæ, drach. ix. mellis vel syrupi, q. s. ut fiat electarium molle, bidui spatio absumendum.—In infusion as follows : R flor. arnicæ, unciam unam, infunde in aquæ fervidæ, lib. ii. ß. per horam dimidiam, & coque per quartam horæ partem, & dein colaturæ, lib. ii. adde syrupi capill. Veneris, q. s. ad gratum saporem, & capiat æger, uncias

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In such cases, we were frequently obliged at first to neglect the ague, and to treat the disorder entirely as a flux. Where there was much fever, the patient strong, and the pains in the bowels acute, we ordered bleeding; and after it a gentle emetic, and some doses of the saline oily purge, or of rhubarb; and gentle opiates in the evening, and other medicines proper in the dysentery, till its violence was abated, before we gave the bark: though in some cases, where the aguish pa-

cias ii. omni.bihorio.—Of an extract prepared from the flowers he gave from three to four, and sometimes to six drachms.

The doctor says, that from the year 1771, to the end of the year 1774, 1645 pounds of this medicine had been used by patients under his care, without ever producing any bad effect. —He likewise administered the root of the arnica in substance for the same purposes; and adds, that it possesses greater antiseptic powers than the flowers, and has a peculiar strengthening quality, which renders it superior, in certain cases, to them. — When he gave the powder, he ordered it to be well mixed with about a fourth part of sugar. — And he likewise ordered it in infusion, made by infusing two ounces of it in lib. ii. of boiling water for 12 hours, and adding unc. iii. of syrup of althea; and of this he ordered his patients to take from two to three ounces every two hours.

Before using the arnica, he recommends to clear the *primæ viæ*; and he observes, that often the three or four first doses are apt to make the patient a little sick, but that afterwards it has no such effect. — This medicine I have not hitherto tried, but if it produces the effects here alledged, it is certainly a very valuable one, and more particularly so, as it grows in many parts of Great Britain.

roxyfms,

roxyfms were very severe, and helped to increase the purging, and the patient was in danger of sinking, we gave the bark, notwithstanding the flux still continued; and the method we followed was the same as that I formerly mentioned, where it was complicated with the malignant fever; which was to give the bark, mixed with diascordium and opiates, or other medicines proper for the dysentery, in the intervals between the purges.

By this treatment, very often both the flux and ague went off. However, it ought to be observed, that unless the aguish paroxysms were severe, and in danger of sinking the patient, or that the disorder had continued for some time, and the paroxysms were distinct, we seldom gave the bark till the violence of the flux was abated: and wherever there was much griping and pain in the bowels attended the flux and ague, there bleeding as well as purgatives were necessary, before exhibiting the bark; which seldom or ever agreed with them, till there was an evident apurexia, or absence of fever, in the intervals between the fits. Where these cautions were neglected, the bark generally made the pa-

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tients worse; and we were obliged to omit
it, till the violence of the purging was
over.

S E C T V.

Of agues attended with jaundice.

SOME agues were accompanied with the jaundice, though not in such a high degree as in the confirmed state of that disorder; and commonly in the beginning the pulse continued rather quick, in the intervals between the paroxysms; and the patients complained of some degree of sickness for the first two or three days. With those the bark always disagreed, till the feverishness between the aguish paroxysms was gone; and we found, that the best method of treating them, was to bleed in the beginning, if there was much fever; and then to give a vomit and purge, and to repeat them, if necessary; and where there was no purging, to give the saline draughts, and other cooling medicines; and to add a few grains of rhubarb, or to give so much of the pilulæ saponaceæ cum rheo, daily, as procured one or two loose stools.

After

After the ague had regular intermissions, and the patient was quite cool, and without fever in the intervals, if the disorder did not yield to the above treatment, which it seldom did, we then gave the bark freely; even though the slight icteric symptoms still remained; and it put an end to the ague, and removed the jaundice at the same time, without the least inconvenience to the patient. In such cases, we generally used to add a few grains of rhubarb to the first doses of the bark; or gave the bark made up into pills with soap, and added occasionally a few grains of rhubarb.

Several of those who had the icteric symptoms along with the ague, had bilious vomitings in the time of the cold fit; they found themselves sick, with a bitter taste in their mouth, before the approach of the aguish paroxysm; and many of them, though they took emetics, which operated freely at this time, yet did not vomit up the bile; but the sickness and bitter taste continued till the cold fit came on, when they vomited bile in large quantities. In such cases, after the use of emetics and purges, and the ague was brought to have regular paroxysms, with free intermissions, the bark, given as just now

mentioned, removed the ague and icteric symptoms, without the least bad consequences.

Many practitioners of great repute have been prejudiced against the bark; and tell us, that the free use of this medicine often lays the foundation of obstructions in the abdominal viscera, especially when it has been given where there was an icteritious colour in the eyes and countenance; and that, in such cases, we ought not to give the bark till these icteric symptoms are gone. At first, I was very cautious of giving it under such circumstances; till meeting with some cases where the paroxysms were severe, and became more frequent, while the patient was so low, as to be in danger of sinking under the disorder, I gave the bark freely, as the only remedy capable of preserving life; which not only stopt the ague, but carried off the icteritious symptoms*, and restored the patients to perfect health.

* This agrees with what Mr. Cleghorn remarks of tertian fevers, in his *Observations on the epidemic Diseases of the Island of Minorca*, who says, “Where there is an icteritious colour of the eyes, we are likewise told, that the cortex should not be administered; though, in my opinion, it is for the most part dangerous to delay it, after the first appearance of that symptom.” Chap. iii. 2d edit. p. 205.

After

After this I gave it freely, in the manner above mentioned, to some hundreds, with great success : and I never saw any mischief follow from using it : indeed sometimes, where it was given rather too soon, it did not sit easy on the stomach, and made the patients hot and restless : but, by laying it aside, these effects immediately ceased ; and generally, after a little time, the paroxysms became milder and more distinct, when the bark was again administered, agreed with the stomach, and put an end to the disorder ; and I am now convinced, from experience, that the cases in which the bark has done mischief, or given rise to obstructions in the abdominal viscera, are but very rare ; and that these mischiefs mostly arise from the obstinacy of the disorder, and not from the use of this drug ; for I have oftener observed these obstructions where little or no bark has been used, than where it was given freely *. What probably has given rise to the belief of the bark's doing so much mischief, is, that in Holland, and other low fenny countries,

* Dr. Pringle takes notice, that these obstructions happened as often without as with the bark ; and therefore seemed to depend on the long continuance and obstinacy of the intermittent. *Observ. part iii. chap. iv. sect. 2. p. 179. 3d edit.*

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where agues are endemic, they are oftentimes extremely obstinate, and yield hardly to any remedies; and if they are stopt by the bark, they often return soon after, and by their long continuance give rise to obstructions of the abdominal viscera, which have been attributed to the use of this specific.

S E C T. VI.

Of agues attended with a purging.

IN some few cases a purging accompanied these icteric symptoms, which we treated much in the same manner as when the ague was complicated with the flux; we gave emetics and purgatives; and the Mindereri draughts with mithridate, throughout the day, and opiates at night, if the purging was violent; if it continued, accompanied with regular aguish fits, the bark, with astringents, generally removed both.

S E C T. VII.

Of some obstinate agues at Bremen.

IN the latter part of the year 1761, and during spring 1762, we had at Bremen many patients in agues of all sorts; as quotidian,

tidians, tertians, quartans, and irregular agues of a very obstinate nature. The town of Bremen is large and well built, situated in a low sandy plain, with the Weser dividing the Old from the New Town; generally a considerable part of the environs is covered with water in the winter, and frequently the Weser breaks down some of the dikes, and overflows all the country round; and every time the river overflows its banks, the cellars of all the new town, and of that part of the old town next the river, are filled with water. All the year round, on digging two or three feet deep into the ground, you come at water.

Agues are endemic at this place, and great numbers of the lower class of people are afflicted with them at all times of the year, especially in spring and autumn.

Some of the sick sent down from the army were bad of agues; but the greatest number we had in hospitals was composed of such as took it in town; either from doing duty on the ramparts, or from lying in bad quarters, or getting drunk and exposing themselves to wet and cold: and many men of the invalid companies who had come from Emden

brought with them old inveterate tertian and quartan agues.

Most of the recent cases were easily cured by the methods already mentioned; though they often continued longer, required a greater quantity of the bark to stop them, and a longer continuance of its use to make a cure, than at other places, which were more dry, and higher situated.

The most obstinate of the recent cases were the irregular intermittents, which had regular paroxysms, but where the pulse was not settled in the intervals; which we were obliged to treat as remitting fevers till the paroxysms became quite distinct, and the patient was cool, and free from any fever in the intervals; after which they commonly yielded to the bark.

Dr. Lind, in an Essay on the Diseases incidental to Europeans in hot Climates*, says, that an opiate given half an hour after the hot fit has begun, is the best remedy to reduce these fevers to the form of regular intermittents; and to procure a perfect apurexia, or absence of fever.—He says, that the effect of opium in such cases is, 1st, To

* See this Essay, p. 313, &c. published at London 1768.

shorten and abate the fit.—2dly, To procure a sensible relief to the head, and to take off the burning heat of the fever, and occasion a profuse sweat, attended with an agreeable softness of the skin.—3dly, To produce a soft refreshing sleep, from which the patient awakes in a profuse sweat, and free from all complaints.—4thly, To prepare the body for the bark, by procuring a complete intermission, and to render a much less quantity of that medicine requisite.—He tells us, that he has given it in a number of cases at Portsmouth, with great success; and that it may be given with the greatest safety; for that even where it had not the desired effect, and did not immediately abate the symptoms of the fever, it never augmented their violence. He adds, that although opiates have such a remarkable effect when given in the hot fit, yet that given in the time of the intermission of an ague, they have not the least effect, either in preventing or mitigating the succeeding fit; and that tho' he gave it frequently during the cold fit, it only once or twice seemed to remove it.—The opiate he commonly prescribed was the following: R aq. puræ, sesunciam, aq. alexet. spirit. syrup. diacod. singul. drachm. ii. tinct. thebaic. gutt.

gutt. xv. vel xx. M. : though when a patient was costive, who was to take the bark immediately after the fit, he commonly prescribed the opiate in about two ounces of *tinctura sacra*. Since the doctor has mentioned this method, in treating of the diseases of hot climates, I have tried it frequently in St. George's hospital ; and with some it had the desired effect, but it failed with others.

But many of those agues which had continued for some time, especially with those invalids who came from Embden, or who had brought on frequent relapses by their own irregularities, were very obstinate. With many the bark had no effect ; with others its use, if persisted in, seemed rather to exasperate the paroxysms, and to do hurt. Nor had almost any remedy we tried a better effect. We gave the following medicines to divers patients ; the saline draughts and cooling medicines ; infusions of camomile flowers and of other bitters ; Dr. Morton's powders of camomile flowers, salt of wormwood, and diaphoretic antimony ; Dr. Mead's powders of camomile flowers, salt of wormwood, myrrh, and alum ; alum and nutmeg ; large doses of sal ammoniac ; large quantities of spirits of hartshorn ; the antimonial drops and powders ;

ders ; to some we gave emetics, both in the intervals and immediately before the fits. In some we tried to promote sweats before the approach of the fits, by making them drink freely of warm liquors while they kept in bed, and took diaphoretic medicines ; and to others we applied blisters.—But all did not put a stop to some of those agues.

Since my return from Germany, I met a very particular case of an ague, which, after having continued for two years, in which time the patient had taken large quantities of bark, and variety of other remedies, was at last cured by the patient's taking some doses of mercury, which threw him into a salivation when very low and weak, and after that the bark, with serpentaria in large quantities : the particulars of this case are to be found in the second volume of the Medical Transactions, published by the College of Physicians in London.

With some the disorder continued till it broke down the crasis of the blood, and brought on a general relaxation of the fibres ; and the patients became cachectic, and fell into dropfies, or were seized with diarrhœas, of which they died. Some had obstructions formed in the liver or spleen, or other viscera,

cera, and fell into the jaundice and dropfies, which carried them off.—In the bodies, of feveral whom we opened, we found indurations of the liver and spleen—in two of them suppurations of the liver—and in one, who had had the ague at Embden, and had long complained of one of those swellings towards the left fide of the abdomen, called the ague-cake *, the spleen was fo much enlarged as to weigh above four pounds.

Some, whose constitutions were worn out by these obstinate agues, fell into consumptions and other pulmonic disorders in the winter, of which they died. One man died in the cold fit †.

Wherever the ague continued long, and the bark had no effect, we were obliged to lay it aside, and to try other remedies adapt-

* I have seen the dead bodies of four people opened, who had those swellings of the left fide, commonly called the ague-cake, which had come after agues; and in all the swelling was owing to an enlargement of the spleen.

† The cold fit is the most dangerous time of the paroxysm, and the greatest part of those who die of agues die at this time; one or two instances of which I saw in the military hospital at Edinburgh in the year 1746—Van Swieten says he has seen the trembling and shaking so great in the time of the cold fit of quartans, that the teeth have dropt out of the head. Comment. in sect. 749. Aphorism. Boerhaav. vol. II. p. 511.

ed to the present circumstances of the patient.

The mild methods succeeded best ; giving the saline draughts and gentle cooling medicines to such as were strong and plethoric, and had the aguish paroxysms violent ; and the gentle aromatics and bitters, or chalybeats, to those of a weakly habit, or whose fibres had been much relaxed, and their constitutions greatly injured by this or any other preceding disorder.

During these courses, we gave at times gentle emetics, ipecacoanha, or a solution of two or three grains of tartar emetic ; and if the patients complained of gripes and purging, which they frequently did, in the course of this disorder, we gave a dose of rhubarb, or of some other mild purge ; and after it other medicines proper for this complaint.

By these methods frequently the aguish paroxysms became gradually milder, and at last vanished. At other times, after they had continued for five or six weeks, we again gave the bark, and found it to have the proper effect. With others they continued through the winter, and went off of themselves in the spring. With others they still continued ; and as no medicines nor time seemed

seemed to have any effect in that country, we recommended their being sent over to England for change of air, as the only means likely to remove the disorder.

Two agues which had resisted the use of the bark were cured by powder of camomile-flowers, salt of wormwood, and diaphoretic antimony; and one by the use of the aluminous powders, with myrrh.—One invalid, who had long been ill of an obstinate tertian, on catching cold, was seized with an inflammation of his throat, for which he was bled, and took a mild purge; next day there appeared a swelling of one of the parotid glands, which we endeavoured to bring to maturation, by the application of emollient cataplasms; after some days it went entirely away, without coming to suppuration; but as there remained still a confusion of the head, and a quickness of the pulse, a large blister was applied to the back, which continued running for some days; after it dried up he fell into a fit resembling that of an epilepsy, and next day had another fit of the same kind; from the time the swelling first appeared till the time he had the first fit, he had no ague, but it returned the second day after the second epileptic fit; another blister

was

was applied, and he had no return of the epileptic fits, though his ague continued obstinate till March, at which time he was sent to England*.—About the same time the aguish fits of two others were stopt by the application of blisters, though they returned in both soon after.

Excepting in these few cases, I found no medicines effectual in stopping those agues, which had resisted the bark when properly given, though we tried a vast variety in different cases. The cortex cascarillæ, or eleutheriæ, was given freely, both in decoction and substance, in four cases, which had not yielded to the bark, but without producing any good effect; we had not an opportunity of trying this bark in more cases of this kind, nor in fluxes, the small quantity of it

* On the 29th of August 1759, a man (Murdoch Brinnen) about thirty years of age, was admitted into St. George's hospital for a very large swelling of the parotid glands and neighbouring parts, which had come three days before, after a fit of the tertian ague, which did not return afterwards. The swelling was discussed by the application of emollient cataplasms, which were intended to have brought it to suppuration. He had no return of the ague, nor did any bad consequence follow the discussion of the tumor, and the cure was completed by a few doses of physic, and a decoction of the bark, which restored him to his strength, and carried off the little heat and feverishness which remained.

which

which had come from England being all expended.

At Coxheath, in summer 1778, the calamus aromaticus given in powder from a scruple to half a drachm, two or three times a day, both by itself and joined to the bark, had a good effect in some old cases in which it was administered.

A soldier of one of the regiments of guards, who was admitted into the hospital for œdematous legs, and the remains of a very bad flux, which he had had ever since the preceding autumn; after being cured of the flux, and most of the œdematous swellings, was seized with an intermitting complaint in February. He had no regular hot and cold fits; but every second day, after a slight shivering and cold, he was seized with gripes and a purging. In one or two of the fits his pulse was very quick, and the pain of the bowels very acute and severe; which obliged us to bleed him, and give him a dose of the saline oily purge; after which we treated the disorder as a flux complicated with the ague, and gave the bark mixed with diascordium, and gentle opiates at nights, and at times gentle purgatives; the ague and diarrhœa stopt very soon, and in a few weeks he got free of all his
com-

complaints, though he still continued weak, till he was sent to England about the beginning of April.

Many, especially those whose constitution had been shaken by this or some other disorder, complained of flatulent swellings of the stomach and bowels, which affected them either while the ague continued, or soon after it was stopped, and were very troublesome and uneasy. For the most part, these swellings were removed by the use of cordial medicines mixed with the bark, or a course of bitters, and some doses of rhubarb given at proper intervals. In some cases, where they were attended with sickness, and the stomach seemed to be loaded, a vomit gave relief. Very often these symptoms continued for weeks after the ague had left them, and did not go entirely off, till the patient recovered his strength.

In February, March, and April, 1761, several of the soldiers in the hospital at Paderborn complained of periodical head-achs, which returned, in most, every day; in others, only every second; and afterwards cases of this kind occurred at different times as long as the army continued in Germany. These head-achs generally began in the forenoon,

were very violent while they lasted, and confined the patient to his bed for some hours. During the pain, the pulse was quick; but in the intervals the patients were quite cool, and without fever. Sometimes, though not always, the urine deposited a little sediment as the head-ach was going off. Commonly the pain was all over the head, but most severe in the forehead; though sometimes it was confined to one side only.

These head-achs we treated entirely as agues of the same type. When the patient was strong, some blood was taken away, and afterwards we prescribed an emetic and purge, and then gave the bark liberally, which generally put an end to the complaint, without any bad consequences attending.

C H A P. XV.

Of the jaundice.

S E C T. I.

Of the causes and symptoms of this disorder.

THE jaundice, or a yellow colour of the eyes and skin, occasioned by an absorption of bile into the blood, was another distem-

distemper which appeared towards the end of each campaign.

This disorder, for the most part, takes its rise * from calculi lodged in the biliary ducts †; and sometimes from a viscid mucus or pituita obstructing those passages ‡; and it may be brought on by a tumour, or any other cause §, compressing these ducts, so as to

* Obstructions and schirrhi of the liver have been assigned as the cause of the jaundice; but as we have so many cases of this kind related where no jaundice appeared, it is now much doubted, whether such obstructions, which do not affect the ducts, are capable of producing this disorder.

† We have numerous cases in Bonetus, and other physical observations, where calculi have been found in the gall bladder, and ducts of people who have died of the jaundice; and I have frequently found two, three, and sometimes twelve, fifteen, or twenty such bilious calculi in these cavities.

‡ Viscid mucus or pituita, or viscid bile, has been observed frequently to obstruct the ducts. Dr. Coe says, sometimes icteric patients discharge very thick bile, almost as viscid as bird lime. See his Treatise on biliary Concretions, chap. ii, where he has collected a great number of icteric cases, in which the bile has been found quite viscid after death.

§ See the case of a jaundice in Bonetus's Sepulchretum Anatomicum, tom. ii. p. 326, where the sides of the common biliary duct were compressed by an enlargement of the glands about the vena portarum; and we sometimes meet with a jaundice in pregnant women which goes off after delivery, and seems to have been caused by the pressure of the uterus and indurated faeces in the colon. Van Sweiten says, he has seen this very frequently. Vol. iii. sect 918, p. 95.

prevent the free flow of the bile into the cavity of the intestines.

The yellow colour, or jaundice, observed in the ague, and some other bilious disorders, seems to arise sometimes from spasms of the ducts; or from too great a quantity of bile secreted and absorbed into the blood, which seems evidently to be the case where large quantities of bile are either vomited or discharged by stool; a proof that the biliary ducts are clear, and free from obstructions.

In the end of the campaign of 1760, after a continued rain for many weeks, the jaundice had been very frequent, and in a manner epidemical, among the troops, for some time before they left the field; and in passing through Munster, about the end of December, I observed several ill of that distemper in hospitals, and met with a few cases of this kind in the hospitals at Paderborn in January 1761; but during the spring and summer, we had only one or two now and then sent to the hospitals for this complaint; though towards the end of the campaign it became more frequent, and several were sent down to Bremen; and some of the garrison were likewise affected with it. During the winter not above four or five were sent to the hospitals

als I attended, and but a few to the flying hospital, during the campaign of 1762. It frequently appeared in dropfical cafes, depending on obstructed viscera.

Those in whom the jaundice was the original disorder, and not complicated with any other, generally got well soon; but where it appeared in dropfical cafes, depending on obstructed viscera, it was commonly fatal.

In the beginning of this disease, patients usually complained of sickness, heat, thirst, and other feverish symptoms; and some had a vomiting, and pain of the stomach, for a day or two before the jaundice appeared; the urine was always of a deep colour from the first; and about the second or third day the skin, and the whites of the eyes, began to be tinged with a yellow colour, attended with the common symptoms of this disorder.

Such was the manner in which the jaundice began in those who were taken ill in garrison; but those sent us from the army could seldom give any accurate account of their own cafes.

In the course of this disorder, the sick were inclined to be costive, though some few had a diarrhœa; several, who had been reduced by fevers, or other complaints, before

the jaundice appeared, were attacked with violent hæmorrhages from the nose; and two had like to have died of them before the bleeding was stopped. The hæmorrhages did not prove critical, but seemed to depend on a dissolved state of the blood.

S E C T. II.

Of the method of cure.

ON the patient's being first taken ill, if he was plethoric or feverish, or complained of pain, attended with sickness and vomiting, some blood was taken away. Next day we gave twenty-five or thirty grains of rhubarb in a saline draught, and afterwards the common saline and other cooling medicines, till the fever was abated. If the pain and fever did not abate, a vein was opened a second time, and a few drops of the tinctura thebaica were added to the saline draughts, while emollient clysters were frequently administered, and the stomach and belly fomented with flannels dipped in warm emollient decoctions.

When the pain and fever were gone, we then gave a gentle vomit in the evening, and
next

next day a dose of rhubarb ; and afterwards so much of the *pilulæ saponaceæ cum rheo* daily as kept the body open ; or the saline draughts with five or six grains of rhubarb in each, or such a quantity as answered the same purpose as the pills ; and from time to time repeated the emetic and purge.

Vomits are reckoned amongst the most efficacious remedies in this disorder, and I have often seen good effects follow their use.— Janet Cragg, a woman thirty years of age, was on the 21st of December 1758, admitted into St. George's hospital for a jaundice of some months continuance. Her eyes and skin were not of the common icteric colour, but of a dark livid yellow, for which reason both she and the nurses termed her disorder the black jaundice. She at first complained of a difficulty of breathing, and a weight and oppression about the region of the liver, for which she was bled, took some doses of physic, and the soap pills with rhubarb ; but these produced no change in her complaints. On the 29th, she had a cough, and complained much of sickness and difficulty of breathing, for which she was ordered a vomit, and afterwards to take the squill draught, morning and evening, which occa-

sioned a purging and gripes. On the 5th of January 1759, the looseness still continuing, I ordered her to leave off the use of the squill draughts, and to take only some rhubarb in an oily draught every night at bedtime. On the 8th, though the purging had increased, I did not chuse to check it, as I suspected it would prove a crisis to the disorder, and therefore only ordered her the cordial draughts and wine to support her strength. The looseness continued till the 15th, when most of the icteric symptoms were gone, and by the 30th, they had entirely disappeared. However, she continued low, and subject to flatulencies for some months afterwards, which were at last removed by the continued use of cordials, gentle bitters, a nourishing diet, and repeated doses of rhubarb; and on the 2d of May she was discharged in a firm state of health.

Dr. Coe * says, "I have more reason to be satisfied of the effects of vomits in dislodging these calculi, than of any other, or indeed of all other medicines." He adds, besides viscid humours, which vomits bring away from the biliary passages, how

* Treatise on Biliary Concretions, chap. ii. p. 253, &c.

often

often are gall-stones likewise found in the stools after the operation of a vomit?

Most of the icteric cases we had, which were not complicated with other disorders, yielded to the above treatment in about twelve or fourteen days. Two or three remained obstinate for a longer time. To one I ordered a quart of the pectoral decoction, made with parsley roots instead of the linseed, to be drank daily along with the soap pills; and the jaundice disappeared in about eight or ten days. One who had the disease more obstinate than the rest, and complained for some time of a tension and uneasiness about the liver, was ordered to have the right side fomented morning and evening, and rubbed for some time after with the linimentum saponaceum, and to drink the decoction of sarsaparilla after the soap pills; and by continuing this course for about three weeks, the disorder went off.

Sometimes the warm bath has a good effect after other remedies have afforded no relief. In the year 1743, a young gentleman, a student of physic at Edinburgh, had a jaundice, for which he had taken variety of medicines, and rode daily on horseback for some weeks, without receiving any benefit:

fit ; at last, by my father's advice, he took a brisk dose of phyfic, and before it began to operate, had a large quantity of warm whey thrown up by way of a clyster, and went immediately into the warm bath. In the bath he was taken with a violent inclination to go to stool ; and after coming out, had a great number of bilious stools that day, and next morning was still inclined to be loose ; and in a few days all the icteric symptoms vanished. On the 20th of July 1763, a middle-aged woman, Elizabeth Hosier, was admitted into St. George's hospital for a jaundice, which came about a fortnight before. She had been blooded, and had taken some medicines, before I saw her. I ordered her a vomit and purge, and to take two scruples of the soap pills and rhubarb daily ; and four days afterwards the vomit and purge were repeated, but without making any change in her disorder. On the 29th she went into the warm bath, and took a vomit immediately on coming out of it. After the vomit she had some loose stools, and the icteric symptoms went all off in a few days. She continued well for some months ; but I have been told, that she has since relapsed.

When

When the jaundice continues obstinate, there is hardly any thing has often a better effect than the continued use of decoctions of the juices of succulent plants, of whey in the spring, of soap, and other aperient medicines. The baron Van Sweiten tells us *, that he has cured many obstinate jaundices by making the patients drink daily a pint or two pints of a decoction of grafs, dandelion, fumaria, succory, and such like, prepared in whey ; to each pint of which he added half an ounce of sal polychrest, and an ounce or two of syrup of the five aperient roots ; and some by ordering them to drink the Spa water in summer, and take freely of soap, along with a decoction of the aperient roots, in winter. In those who were cured by these remedies, he says, stones, or a kind of grumous calculous matter, were always found in the stools, as the jaundice was going off. He relates one very particular case of a lady of sixty years of age, who had had a black jaundice for twelve years, and was cured by continuing the use of these medicines for eighteen months ; during the last six months of which she had a looseness, and constantly

* Comment. vol. iii. § 950.

discharged by stool a fetid granulated matter of the colour of clay : and another singular case of a man who was cured by living mostly upon grass, and a decoction of it, for two years together. The man came at last to devour such quantities of it, and could distinguish the good sort from the bad so well, that the farmers often used to drive him out of their fields.

Glisson * tells us, that cattle are subject to bilious concretions in winter, which are dissolved and evacuated in the spring, when they begin to move much about, and eat the new grass, which purges them.

Dr. Ruffel † greatly recommends the use of sea-water along with the saponaceous medicines.

Mercury has been esteemed as a particular good deobstruent in obstructions of the liver in the East Indies ; and I have seen some iſteric cases which I thought received benefit from taking a few grains of mercurius dulcis at night, and a purge next morning, and this repeated two or three times in the week.

* Oper. vol. ii. Anat. Hepat. cap. vii. p. 104.

† See his Treatise on the Use of Sea-water.

The hæmorrhage from the nose commonly stopped soon. Where it was violent, we kept the patient cool, and applied cloths dipped in vinegar and water to the nose.— In two cases, one at Munster, the other at Bremen, the patients were hot and feverish, and a vein was opened, and eight or ten ounces of blood taken away; and in one case nothing took effect till we gave repeated doses of the tinctura saturnina in a common acid julep.

C H A P. XVI.

Of tumours of the breast.

IN May 1761, a great many of the patients who had been in hospitals the preceding winter, had tumours formed on the external part of the breast, which they shewed me at Osnabruck. They began in the form of indolent tumours, and came slowly to suppuration. For the most part, the suppuration was only partial, and the tumour, on being opened, discharged a very small quantity of matter. Some of these tumours; though they felt soft, and seemed to contain matter, yet, upon being opened, discharged only a small quantity

quantity of black blood. None of them melted down entirely into pus, or came fully to suppuration, and healed kindly as abscesses which succeed acute inflammations. But after a small quantity of matter was discharged, for the most part, there still remained a hard tumour, which felt as if it was a swelling of the bone, or cartilage below; and in some the surface of the bone was found rough at the bottom of the abscess.

These tumours seldom rose high, and were most of them situated at the lower part of the sternum, or a little to one side of it, commonly on the left side, above the cartilago ensiformis. Some patients had only one, others two, and some three such tumours. The first of them I saw was on the left side, which, on being felt, gave exactly the same sensation as when the cartilages of the sternum are begun to be raised by an aneurism of the aorta; only no pulsation was to be perceived; and most of them had the same appearance.

The patients, who had such tumours, commonly complained of pains of their breast. One or two, after these tumours came to suppuration, seemed to recover their health,

health, and to feel no uneasiness, tho' some of the swelling remained: but many of them were inclined to be hectic, and seemed likely to grow consumptive.

Being ordered up to the flying hospital in June, and the sick going down to Bremen, I had no opportunity of seeing the event of these tumours, or of examining the bodies of those who died with them. One I accidentally met with the following winter at Bremen, who died of a consumption and diarrhœa. He had a large abscess, which penetrated into the cavity of the chest, and discharged a great quantity of very fetid matter, at the part where one of these tumours had been seated, and the sternum and ribs were carious all round the abscess.

C H A P. XVII.

Of paralytic complaints.

SOME of the soldiers, from lying out in the nights on the wet ground, and from doing duty in cold rainy weather, were seized with a pain and numbness all over, and lost the use of their limbs, which in some was succeeded with a palsy of these parts: but
the

the greatest number of those afflicted with paralytic symptoms were seized with them either in fevers, or after feverish and other disorders. The numbers who were attacked with complaints of this kind were but few.

When men were suddenly taken with pain and numbness all over, we found that the best method of treating them was, to put them to bed, and give them plenty of mild warm diluting liquors for drink; and if there was much fever, to open a vein, to give the cooling antiphlogistic medicines, and to apply blisters; and if these complaints still remained, to endeavour to promote a breathing sweat, by means of diaphoretics and warm drinks. Several who were brought to the hospital, soon after being seized in this manner, got well; but in some few, one or other of the limbs began to waste, and remained paralytic afterwards.

Those who had the true confirmed palsy seldom remained long enough with us to be cured. Two or three received benefit from blisters applied to the parts, and from issues; drinking at the same time the decoction of the woods, or of sarsaparilla, and taking the volatile tincture of guaiacum or valerian,

valerian *, and being sweated by the use of Dover's powder, or other diaphoretics.

One man of the 51st regiment of foot, after doing duty in very cold wet weather, in the beginning of the year 1762, was seized with a palsy of one side of his face, which prevented him from speaking distinctly, and was an impediment to his eating. He

* On Wednesday the 1st of February, 1764, Margaret Julion, a woman between fifty and sixty years of age, was admitted into St. George's hospital for an entire loss of speech, which seemed to depend on a paralytic disorder of the parts about the larynx. The account her friends who came with her to the hospital gave of her case was, that she had been for five months troubled at times with pains of her bowels, and a purging; that on Sunday se'ennight before coming to the hospital, she had suddenly lost the use of her speech, and had not spoke since that time, though she seemed to hear and understand whatever was said to her. I asked her some questions, which she answered distinctly by signs. She had no paralytic complaint of her face, arms, legs, or any other part of her body, and swallowed both fluids and solids with ease. She had no fever, and seemed to complain of nothing but the loss of speech.—A blister was applied to her neck, and she was ordered the saline draughts, with a scruple of powder of valerian in each, to be taken three times a-day, and a dose of sacred tincture, to be taken twice a-week. She followed this course for a fortnight, when another blister was applied to the forepart of the neck, and the powder of valerian in the draughts was changed for two drachms of the tinctura valeriana volatilis. At the end of three weeks she could pronounce the two words Why, What. She continued the same course till the 16th of March, and could then pronounce many words and short sentences.

mended much after being blooded, and having a large blister to his neck kept open for some time by means of the epispastic ointment.

C H A P. XVIII.

Of an incontinency of urine.

AN incontinency of urine was another complaint frequent among the soldiers; but it seemed to me to be counterfeited by many. All who had it, said that they had received some hurt * or sprain of the

* A foldier in the hospital at Paderborn used to discharge his water involuntarily, and mixed with pus, which came from some violent blows he had received on the back.

John Pearce, a young man about eighteen years of age, was admitted into St. George's hospital, the 10th of April 1759, for a pain of his side, and a complaint of the bladder. The account that he gave of his own case was, that some months before, he had received a violent blow with a cricket-bat on the left side, on the region of the kidney; and that ever since he had had a sharp pain in that part, and sometimes had a stoppage of urine, and at other times it came away insensibly. His pulse was rather quick, but low, and he had a feverish heat. He at first took some cooling medicines; but on the 20th, being low and faint, he had some of the foetid julep. On the 23d he was attacked with a sharp pain in the belly and side, had a stoppage in making water, a quick and full pulse, and most of the

the back, or a kick from a horse, or that a carriage had run over them.

Those

the symptoms of the stone. He was ordered to be bled immediately, to take the saline draughts every four hours; and as he was inclined to be costive, to take as much lenitive electary as to procure him a loose stool; and it was recommended that he should be bled as soon as the violence of the fever was over. On the 25th he continued much in the same way, and had made some water, which was intolerably foetid. Half a drachm of the dulcified spirit of nitre, and five drops of the tinctura thebaica, were added to each of his draughts, as the pain and difficulty of making water had increased. On the 26th his pulse rose, and became very hard and quick; the pain in his side, and the dysuria, became more violent; and about twelve o'clock he had a convulsive fit, resembling that of an epilepsy; after coming out of the fit, as the fever and pain had increased, he was bled; the belly was fomented and embrocated, and he took the oily draughts four times a-day: his blood immediately threw up a very thick buff. He remained pretty easy the rest of the day; but about the same time next day he had another convulsive fit, and died.

On opening his body, we found about two or three pints of a dark-coloured foetid water in the abdomen; on cutting through, and squeezing the right kidney, there came out a thin purulent matter every where from its substance, though it appeared sound; on raising and cutting through the peritoneum, covering the left kidney, there was a discharge of about a pint of black and very foetid water, which had every where surrounded this kidney; and there were six mortified spots on its surface, as large as the end of one's finger, with a depression in each about a quarter or half an inch deep; most of the substance of this kidney seemed diseased, and it was full of suppurations. The bladder was contracted and thickened, and contained a rough stone, which weighed three ounces. The rest of the viscera were sound. This stone had certainly been in the bladder long before the young fellow received the blow

Those who really had the disorder seemed to have received such an injury of the bladder, or kidneys, as required a considerable space of time to get the better of; and by reason of the short time we had them under our care at the flying hospital, they seldom received much benefit. One or two thought they grew better on taking the bark and balsam of Peru; at the same time they bathed morning and evening the lower part of the abdomen and perinæum, with flannels dipped in gentle astringent liquors, applied cold. Blisters applied to the os sacrum had no effect, in any of the cases in which I tried them in Germany; and since that time I have ordered them to a dozen of patients in this complaint; and one only received benefit from their use.

with the cricket-bat; but the injury done the kidney had probably aggravated the symptoms.

I do not remember ever to have seen convulsive fits, such as this young man had, in acute diseases, except in one case of a slow fever, which came by taking cold after a salivation, and which I attended, along with Dr. Pringle. The gentleman had three fits exactly of the same kind as this young man, at twenty-four hours distance from one another, and he died of the third.

C H A P. XIX.

Of a stoppage of urine.

WE formerly mentioned, that in acute diseases many complained of a stoppage or difficulty of making water; and others had this complaint from strictures of the urethra, or disorders of the bladder or kidneys*.

Where

* It is often very difficult to judge of the cause, or to be able to determine exactly the seat of these disorders before death; as the following cases will shew.

John Waden, a middle-aged man, was admitted into St. George's hospital the 10th of April 1759, for a swelling of the abdomen, and a difficulty of making water, which he said begun about two months before, with a violent pain in his back and belly, occasioned by his being employed in making of cyder in a very cold cellar. He had not had a stool for some days; at first he took a dose of physic, and some of the saline draughts; but in a day or two complained that his belly had grown to a monstrous size, and that he had not made water for above twenty-four hours: on examining, we found the bladder so much distended as to reach up to the navel; and upon the catheter's being introduced, above two quarts of water were drawn off, and the swelling immediately subsided; but in the afternoon was as large as before, the bladder seeming to be in a paralytic state. During the months of May and June, his water was drawn off twice a-day; he had his belly fomented with emollient, astringent, and other decoctions, and embro-

Where it depended on strictures of the urethra, bougies introduced into that passage, and

cated with liniments; was blooded once when feverish, took cordials, the bark, myrrh, and a variety of medicines, without any effect. On the 3d of July, a flexible catheter was introduced into the bladder, and left there, in order that the urine might drain away as fast as it was secreted, and the bladder be allowed to contract, and recover its tone. The catheter gave him no pain, and he thought himself much easier by the bladder's never being too much stretched; but on taking out the catheter some days after, he had the same stoppage of water as before. On consulting with Dr. Batt and the other physicians, it was agreed to give two grains of the powder of cantharides, with three grains of camphor and ten of sugar, rubbed well together in a mortar, twice a-day; and to continue the use of the flexible catheter. He found no uneasiness or strangury from the use of the cantharides, and thought he passed his water more freely, when the catheter was taken out; but after fourteen days, finding no change for the better, and being free from any fever, he was ordered into the cold bath; the two first days he found himself more lively and brisk; but the third day was chilly and cold after coming out of it, and therefore was desired to leave it off; some days after he became bedic, and I observed pus in his water, which he said he had passed with his urine for above three months. After this he languished for near a month, and died upon the 25th of August.—Upon examining his body next day, we found the thoracic viscera in a sound state, except that the lungs adhered a little on the right side. Both kidneys were diseased; they were inflamed, and seemed enlarged; and on cutting them, had tubercles dispersed every where through their substance, which had come to suppuration, and contained a good deal of matter; the lower part of the left kidney was mortified, and contained two or three ounces of a black foetid liquor. The bladder of urine was contracted, and its coats greatly thickened, and the internal coat much inflamed; and there was a cyst full of matter, about

and worn for some time, were of great service. The patients were at the same time ordered

about half the size of a walnut, between the muscular and villous coats, towards the lower part of the right side of the bladder; and there were two large cysts, containing a small quantity of matter, though capable of containing near two ounces each; one situated between the vesiculæ seminalis and rectum, the other between the vesiculæ and bladder, which opened into the urethra by one common orifice, capable of admitting a large quill, at the side of the caput galinaginis. The rest of the viscera were in a sound state.

Mary Hibbard, a woman twenty-four years of age, was admitted into St. George's hospital, the 6th June 1759, for a complaint of her bladder. The account she gave of herself was, that, about Christmas 1758, she had parted with some gravel; and about fourteen days before coming to the hospital, she was seized with a violent pain in her back and loins, attended with a sickness and nausea; and very soon after complained of a violent pain in the lower part of her belly, and with a perpetual inclination to make water, though she felt a sharp pain and difficulty in doing it; and that these complaints still remained. Her pulse was quick and strong, and she was inclined to be costive. She was immediately bled, took the oily draughts three times a-day, the decoctum furfuris for common drink, and so much lenitive electary as procured her a stool next day. As there was a strong suspicion of her having a stone, she was sounded; but nothing at all was to be felt in the bladder. Her medicines eased her pain in making water, but not the pain in her back. On the 16th her water was thick and turbid, and deposited a brown sediment; and the difficulty in making water still remained; instead of the lenitive electary she was ordered the rhubarb oily draught to be taken every night. On the 18th, there being no change in her disorder, she had draughts made of an ounce and a half of simple mint water, half a drachm of the dulcified spirit of nitre, and five drops of the tinctura thebaica, and syrup three times a-day; but on the 22d she complained, that since

dered to live on a cool diet, and to drink the decoctum Arabicum, or an infusion of linseed,

she left off the oily medicines, her pain and difficulty in making water had grown worse; she was therefore ordered the saline and oily draughts alternately, and to take the rhubarb oily draught occasionally when costive, which removed these complaints; and they did not return while she remained in the house; but on the 4th of July, the day before she was to have been discharged as cured, she was attacked with a sharp pain in her hip and loins, and about the os coccygis; which increased till the 9th, and extended itself all along the outside of the right thigh; it was most acute about the os coccygis; but on examining, nothing was to be observed externally: this pain continued more or less all that month, and till the end of the next, and so obstinate as not to be altered by bleeding, and the use of liniments, blisters, cooling medicines, opiates, warm baths, and other remedies. On the 20th of August, a strengthening plaster was applied to her back, which gave immediate relief, and she was discharged cured the 29th. She continued well till October, when she was attacked with a violent fever at Hounslow, and was brought to the hospital on the 24th of that month, and the tenth day of the fever. She died the 3d of November. During the course of the fever, she only complained once of a difficulty of making water.—After death I had her body opened, when the only thing particular which we could observe, was the urinary bladder about four times the natural size; it seemed to be flaccid, and in a state of relaxation; the kidneys were sound, and no signs of any distemper could be observed about the uterus or rectum, or near the os coccygis.—When she was first in the hospital, I desired her always to examine her urine; but she never observed that she passed any sand, gravel, or any thing of that kind.

Thomas Jacey, an elderly man, was admitted into St. George's hospital the 14th of March 1759, for a pain in his back, and a difficulty and pain in making water, which was often mixed with

feed, or such other mild mucilaginous liquors; and to take oily medicines and opiates
occa-

with grumous blood; but he had never observed any sand or gravel in it. His pulse was quick and full, attended with heat and thirst; and he was inclined to be costive; he was at first blooded, and took a dose of laxative mixture, and two ounces of the tincture of roses, four times a day, and the decoctum malvæ for common drink. At first he seemed relieved, and passed no grumous blood for some days; but on the 26th, as he complained much of a pain in making water, the tincture of roses was changed for the oily draughts, and he was ordered the rhubarb oily draught occasionally. On the 9th of April he fell suddenly into a comatose way, and remained so till the 12th, when he died, notwithstanding the use of divers remedies.—Upon examining his body, both kidneys were found in a sound state; the intestines covered with slight inflammatory spots, the bladder of urine quite contracted, schirrhous, and greatly thickened; and its internal surface rough and eroded, with one or two black spots on it, and some grumous blood lying on its surface. The other viscera were found.

In ulcers of these organs, the natural balsams, mixed with soft things, are often of great service; of which the following case is an example.—William Lumley, a boy nine years of age, was admitted into St. George's hospital, the 6th of September 1759, for a pain in the bladder, and a difficulty in making water, which was always more or less mixed with matter. At first there was a suspicion of his having the stone; but on sounding, none was to be found. From the symptoms, it appeared as if there was an ulcer in the bladder near to its neck; the boy had a cough, was very low, and inclined to be costive; at first he took three spoonfuls of the sperma ceti mixture four times a day, and a dose of physic; but the symptoms still remaining, on the 2d of October he was ordered to take a scruple of the electarium e spermate ceti three or four times a day, and to have the gum Arabic decoction for his common drink. By continuing the use of these things, and
tak.

occasionally, and gentle laxatives, to keep the body open ; which method of treatment generally gave relief. Where the patients were plethoric, or complained of pain, or the disorder was attended with a fever, bleeding was often necessary.

When the stoppage of urine seemed to arise from an inflammation of the kidneys or bladder, or other diseases of these parts, we treated it accordingly ; and where the fever was considerable, we made evacuations, and gave plenty of diluting liquors, and the cooling saline medicines, and afterwards those of the soft, mucilaginous, and oily nature, and mild diuretics and opiates.

When the disorder, in its progress, became chronical, the sick were commonly sent down to the fixed hospital, so that we had no opportunity of examining the bodies of such as might die of this complaint.

The following account of a remarkable suppression of urine I had in a letter, dated the 25th of November 1757, from Mr. Pearson, one of the surgeons to his majesty's

taking some opiate and laxative medicines occasionally, he mended by slow degrees, and all his symptoms went off ; and he recovered his health and strength, and returned thanks for his cure the 18th of January 1760.

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military hospitals, who then served as a mate, and now lives at Windsor.

James Ruffendal, of the 20th regiment, aged twenty, of a delicate habit, was, in the middle of July last, seized with a violent pain in both kidneys, which extended along the ureters to the bladder, and remained in the same situation for about three weeks; during which period his urine began to decrease in quantity, and the voiding of it was attended with acute pain about the neck of the bladder. The secretion then totally stopt; he remained for upwards of five weeks in the hospital at Dorchester, and made no water; at the end of which time I first visited him along with Mr. Adair. He complained then of a slight pain in his kidneys, and told us he had a tolerable appetite, sweated little, and voided every day four or five liquid stools. He was ordered boluses of camphor, and *sal. vol. c. cervi*, and every night a dose of *tinctura cantharidum*; which he continued to take for a fortnight without receiving the least benefit. I then bled him to the quantity of ten ounces, and gave him an emetic of six drachms of the *vinum ipecacoanhum*, and two ounces of the oxymel of squills, which operated very well; and
after-

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afterwards ordered him to take one of the following bolusses every four hours. \mathcal{R} Sapon, alb. dur. Hispan. drachm. i. sal. ayfynth: g. vi. calc. viv. gr. x. balsam. Peruv. q. s. ut fiat bolus. These he continued to take for twelve days. On the morning of the 14th of October, he was suddenly seized with an acute pain in both kidneys, and about noon voided upwards of half a pint of straw-coloured urine, which let fall a clay-coloured sediment. As he was feverish, I took away twelve ounces of blood, and ordered him barley-water with nitre for drink. He was easy in the night, and made upwards of two pints of urine, which deposited a sediment of a gelatinous consistence. Next morning the pain increased, especially in his right side, and ten ounces more of blood was taken away: this lowered the pulse, and considerably abated the pain. Both this and the blood taken away the day before threw up an inflammatory buff. He was ordered to continue the use of the barley water with nitre, and to take three spoonfuls of a mixture with spiritus Mindereri every two hours. He had an easy night, and was next day free from fever; but complained of an uneasiness in his stomach and nausea. He was ordered
a scrup-

a scruple of the powder of ipecacoanha, which vomited him, and procured him a stool. He was easy in the night; but in the morning was hot, and complained of a pain in his right kidney, and all over his bones, as he expressed it. I then gave him a mixture, with spiritus Mindereri, and the pulvis contrayerva comp. of which I desired him to take some spoonfuls frequently. This procured him a plentiful sweat, which removed the fever and pain: these symptoms returned next day, but were removed by the same means. I remained at Dorchester for a week after, and he recovered his strength and appetite as much as could be expected in so short a time; but he still complained of pain in his right kidney, though he made water freely. By a letter I received from the gentlemen whose care I left him under, I understood he had a relapse, which he has since got the better of.

I forgot to inform you, that his father died of the same complaints, after being six months without secreting a drop of urine; and his brother died of the same in about ten weeks.

In January 1768; Mr. Pearson, at my desire, wrote to Mr. Hawkeens of Dorchester, under whose care this man was left, to enquire

quire after the event of his disorder, and he had the following answer, dated Dorchester, Feb. 20, 1768.

The account you have given of James Ruffendall's case in Dr. Monro's Treatise is very just. The following is the method in which I treated him till he was perfectly recovered and discharged.

He was left under my care at Dorchester the 25th of October, 1757; was then in a very weak state, bloated and œdematous all over, had no desire of moving, was costive, and had a kind of hectic fever, had no appetite and passed but little urine.

I gave him thirty drops of a mixture of one part of elix. vitriol. mynſ. and two parts of spirit. nitri dulcis, two or three times a day, and a dose of manna and Glauber's salts occasionally when costive; and he continued this course till the 3d of November, by which time he passed his urine well, but complained of great pain over the pubis, and along the right ureter, side, and breast, and he was pale and weak, and had no appetite, but his fever was gone.

He then had four of the following pills, morning and evening: \mathfrak{R} Pil. Ruff. sapon. alb. Hispan. dur. $\overline{\text{aa}}$ drachm. ij. pulv. rhab. drachm

drachm i. ol. stillat. juniper gutt. xv. syrup. q. s. ut fiant. pil. lx. which he continued to take till the 25th of November, and then had a dose of salts and manna on account of his costiveness.

On the 27th of November he had a relapse, having little or no secretion of urine, and thought it all passed by stool; his principal pain was over the pubis and loins; but he thought himself stronger and had a better appetite. I ordered him then to take the size of a large nutmeg of the following electary three times a day. \mathcal{R} Test. ovor. calcinat. sal nitri, rad. althææ pulv. singulorum unciam dimidiam. camphoræ scrup. i. m. syrup. violarum, q. s. and to drink after each dose a quarter of a pint of a strong decoction of the parietariæ muralis. After the use of these for a fortnight, he secreted his urine much better, and was quite free from pain.

I then ordered him to take a drachm of the following pills twice a day. \mathcal{R} Sapon. alb. Hispan. drachm. vi. milliped. pulv. unc. dimid. pulv. rhabarb. drachm. ij. sal succini vol. drachm. i. ol. stillat. juniper. bals. Peruv. āā gutt. xxx. m. ut fiat massa. After taking these for some time, he passed his urine extremely

tremely well, was free from pain, recovered a good habit, and regained a florid complexion; and was discharged from my care, as well as from his regiment, and walked home to Lancashire, which was the place of his nativity.

C H A P. XX.

Of the epilepsy.

THE epilepsy, or falling sickness, attacked a number of men, from the severe duty of long marches in hot weather, and afterwards lying out on the cold ground, exposed to the damps of the night *.

It was very seldom that men were cured of this disorder in the military hospitals. We had some few instances, indeed, where relief seemed to be obtained by rest, a regular diet, gentle evacuations, and issues †; but even

* I saw above twenty men, while I was in Germany, who attributed the epileptic fits they were attacked with to these causes, and said they had never had the epilepsy before; besides others, who had been formerly subject to these fits, who declared, that the disorder was brought back by the same means.

† William Wilson, a boy fourteen years of age, was admitted into St. George's hospital, Sept. 20, 1758, for epileptic fits, which he had been subject to for some time, and
which

even those men generally relapsed as soon as they were sent to their regiments, and began to

which generally seized him three or four times a week. He took variety of medicines without any effect till the 6th of November, when I ordered him to take eight grains of the *pilulæ foetidæ* morning and evening, and physic twice a week, and a seton to be made in his neck. After the seton began to run, he had but three or four slight fits in November, and none the following month; and he was discharged the hospital the 3d of January 1759, seemingly in good health, with directions to keep the seton running at least for some months after he went home, and to come again to the hospital if he should have any return of his fits; but we never heard more of him.

Mary Hacket, a girl of nineteen years of age, was admitted into St. George's hospital the 14th of February 1759, for fits. The account she gave of her case, was, that about five years before she was seized with the first fit, after a fright; three years afterwards she had a second fit, and for some time after had a fit commonly once a month, about the time of the full moon; and since had them more frequently; that the fits began with a trembling and shaking of the right foot, and she had frequent pricking pains in the right thigh, and what she called convulsive tremors in the right leg and foot. She was regular in her menstrual discharge. At the time she came into the hospital, she was feverish, and complained much of a sharp pain in the right thigh: she was blooded, and took some cooling medicines, and had no fit till the 9th of March: she then took the fetid pills and camphorated julep twice a day; but still the fits returned frequently. She then had the bark, valerian and purging doses successively, and used the warm bath; but without any effect. On the 7th of May a blister was applied to her right foot, which was intended to be kept open; but an inflammation coming on that leg and foot, it was suffered to dry up, and an issue made in the same leg. From the time the blister was applied, she had no fit while she remained in the hospital. She was discharged the 15th of

to do duty. All who had these fits after being some time with their regiments, were at last discharged, and sent home. However, before men are discharged for fits, they should be watched very narrowly for some time ; for there is no disorder which soldiers are more apt to counterfeit than this.

It is no wonder that soldiers, during the time of service, should seldom be cured of these fits ; for in adults it is not often cured even in private practice, with all the conveniencies and advantages to be wished for ; and generally the few that do get well, require a considerable length of time to accomplish the cure ; and we find from daily experience, as well as from examining the records of medicine, that the cures that have been made, have mostly been performed either by a change of air, such as going from a cold to a hot climate *, by some remarkable change

July, seemingly in good health ; though during that period she had some little tremors in her foot, and was subject to be low and faintish, which was always relieved by cordial anodyne medicines. After going out of the hospital, she remained in good health for seven or eight months, when I was told her disease had returned as violent as ever.

* Hippocrates lays the chief stress of the cure upon change of air, Aphor. 4, 5. sect. ii. The baron Van Sweiten says, he has known a great number cured by going to the East Indies ;
many

change of life *, or some accidental disorder †; or by issues or drains ‡; or by the
remo-

many of whom have remained well ever after, while others had a return of the disorder when they came back to Holland. Comment. vol. iii. p. 436. sect. 1080.

* Celsus has long ago observed, that the appearance of the menses in girls; and of puberty in boys, often removes this disorder, lib. iii. cap. xxiii.—On the 22d of November 1758, Mary Evans, a girl of eighteen years of age, was admitted into St. George's hospital for fits. She had never had the menstrua; but, for above two years, found regularly, once a month, a fulness in her breasts, and had a slight head-ach, and other symptoms which generally precede this discharge; and were succeeded with violent epileptic fits, which continued returning frequently for two or three days, and then went off; and she had no more symptoms of them, till about the same time next month. She was ordered to take ten grains of the pilulæ foetidæ morning and evening, and a dose of physic twice a week; and as I found that she became plethoric near the time her fits used to return, I began to imagine, that both the fits and stoppage of the menstrua were owing to too great a fullness of the vessels, which prevented the heart and vascular system from having such free play, as to drive the blood through the extreme uterine vessels: I therefore ordered seven ounces of blood to be taken away from her immediately. In three days time the menstrual discharge began to make its appearance; and on the 10th of January she was discharged the hospital, seemingly in good health, after the menstrual discharge had returned for two regular periods, without any appearance of epileptic fits. She was desired to come back to the hospital, if the fits returned; but I never heard more of her.

† William Glen, a patient in the Royal Infirmary at Edinburgh 1747, was freed from epileptic fits, which used to return ten or twelve times a day, for a quarter of a year, by a diarrhœa coming on; but they afterwards returned.

removal of some acrid or irritating substance, or such like*; or by preventing the cause†; and that those medicines called specifics have in general had but little share in the cure.

A man subject to the epilepsy was cured of it by a quartan ague, and had afterwards no return of the disorder. *Miscell. Curios. Dec. 3. Ann. 3. p. 34.*

‡ There are numerous instances of the good effects of issues and drains in diverse authors. *Tulpius, Van Swieten, &c.*

* *La Motte* gives one instance of a person being cured of the epilepsy by voiding five stones, *Chirurg. vol. ii. p. 20*; and of another who died of the fits from a triangular stone remaining in the kidneys, *Ibid. p. 416.* *Dr. Short* cured a woman of an epilepsy of twelve years standing, by extirpating a cartilaginous substance, about the bigness of a large pea, seated on the *gastronemei* muscles, above a nerve which he cut asunder. *Edin. Medic. Essays, vol. iv. art. 27.*

† *Galen* tells us of his having prevented the epileptic fits in a boy, who used to have one whenever he was hungry, by making him carry bread in his pocket, and eat a little as soon as he found the least symptom of hunger. *De Loc. Affect. lib. v. cap. vi.*—And *Van Swieten* mentions how he cured a boy, who had a fit every full moon; whose under lip used to fall a trembling before it began (a symptom which, he says, often precedes vomiting), by giving a vomit every month; for six months successively, three days before the full moon, and an opiate in the evening after its operation; and by putting him under a course of strengthening medicines. It was observable, that if he vomited in the time of the paroxysm, it was soon at an end. See his *Comment, vol. iii. p. 439. sect. 2050.*

C H A P. XXI.

Of the small-pox.

S E C T. I.

Of the small-pox among the troops in Germany.

THE small-pox appeared at Paderborn in the spring 1761, and five had the distinct kind, who recovered. Six or seven had them at Osnabrug in May and June, and one man and a child died of the confluent kind. Four had the distinct kind at Munster in July and August, who all did well. During the winter, we had sixteen in the hospital I attended at Bremen; ten had the distinct kind, and all recovered; five had the confluent kind, of whom two died; as did also one who was brought to the hospital with all the symptoms of the most malignant kind. Two were sent to Natzungen in July, both ill of the confluent kind; the one died two hours after his arrival; the other recovered: and we had only two in the hospital at Osnabrug in winter 1762-63, and both did well.

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There was nothing particular either in the course or treatment of this disorder, different from what we meet with in daily practice ; only as the soldiers, who were attacked with it, were strong, and in full health, they required bleeding and gentle evacuations, and a cooling regimen, on the first appearance of the symptoms.

The malignant kind required the use of acids, and the bark ; which last could often only be administered by way of clyster, as the sick could not swallow it, and when they were low, cordials, and the free use of wine, were sometimes absolutely necessary : in short, we treated the patients much in the same way as in the malignant fever, allowance only being made for the present circumstances. And from what I have since observed, I am confirmed in my opinion of this being the best method of treating the malignant kind of small-pox.

S E C T. II.

Of the treatment of the natural distinct and confluent small-pox.

OF late a much more cooling method of treating the small-pox has been introduced than was formerly practised, and it has been attended with remarkable good success.

From what I have observed in the many cases I have attended, I should recommend the following method,

1. To keep the patients extremely cool, and to expose them to the free air, by opening the windows in mild weather, or by making them go out into a garden.

2. To make them live entirely on a cooling vegetable diet, and drink freely of cool, mild, acescent liquors.

3. To make them lose more or less blood in the beginning, if the feverish symptoms run high; and if there is no purging to give a dose of some mild laxative medicine to empty the bowels, and to cool the patient before the eruption of the small-pox; formerly this practice was thought to be ex-

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tremely

temely dangerous, and it was believed that purging at this time would retard the eruption, but later experience has shewn this to be a mistake.

And some practitioners have alledged that purging at this period evacuates a quantity of the variolous matter, and renders the disease milder; a physician of eminence told me, that he had not had the small-pox till he was a man, and engaged in the practice of physic; that he was seized with the first symptoms at a time when several of his relations had just died of the confluent kind, which was then frequent in his neighbourhood; that being persuaded that repeated purging would render the disorder mild, he followed this practice with himself, and had a very mild sort and was soon well; though in the beginning he thought he had all the symptoms of a bad confluent kind; and he added, that he had since followed this method often with the greatest success. Although I have often ordered gentle purgative medicines before the eruption, and never found any bad effects from their use, but on the contrary observed, that they made the patient more cool and temperate, yet I have never attempted by repeated purging to render

der the disease milder, and therefore I cannot recommend this practice from my own experience; but I think where the disorder is of the distinct kind, attended with no bad symptom, that we had better do no more than just to empty the bowels by the use of some mild laxative medicine, and trust the rest to nature; but where we have reason to suspect a bad sort, attended with dangerous symptoms, it is worth while to give this method a trial.

Many practitioners at present prefer mercurial purges to others, from a belief that mercury serves in some measure to correct the virus of this disorder; but how far this may be true, I think is much to be doubted.

If things go on kindly, little more is requisite after the eruption, than to give the patient some mild cooling medicines, and after the 11th, 12th, or 13th day, to give a few doses of some gentle purging medicine, to cleanse the bowels, and carry off any dregs of the disorder which may remain.

Purgatives ought not to be given too soon; while the pustules are still full of the varicellous matter; for I have seen several cases, where a difficulty of breathing, which has terminated

terminated in a phthisis pulmonalis has been the consequence of this practice.

Hot air and a warm regimen, in the small-pox, have been the destruction of many.—Cordial and heating medicines are in general prejudicial, except in particular cases, where patients are low, or the disorder is of the malignant kind.—Opiates are, for the most part, useless, except where the sick are very restless, and have but little fever.—And blisters are seldom requisite, but where the pulse is too low, or the breathing affected: and where the patient is strong, the fever very high, and the breathing affected, bleeding is sometimes requisite.

But if any troublesome or dangerous symptoms come on, these must be treated as the circumstances may require.

Such is the method which, from experience, I should in general recommend for the treatment of the small-pox; though we meet from time to time with cases, where we are obliged to deviate from these general rules, and I shall therefore mention some few necessary cautions.

1st, That where patients in the small-pox are low and weakly, we ought, after emptying the bowels in the beginning, to be
cautious

cautious of the too free use of opening medicines, lest we weaken them too much; and that where they are very low, we must sometimes allow the moderate use of wine and of cordials.

2dly, That where patients are very restless, and much fatigued for want of sleep, that if there is not too much fever, opiates are often of use to procure rest; and that if the breathing is affected, a gentle emetic, and the use of oxymel scilliticum, and other pectorals, and the application of blisters are often necessary; and where the patient is costive, that laxative clysters, or the use of mild opening medicines, are sometimes of service.

3dly, That although the exposure to a cool free air, and drinking freely of mild cooling liquors, is in general of the greatest advantage, yet we now and then meet with particular delicate constitutions, which cannot bear the exposure to much cold; and it sometimes happens, that very delicate people, and some children, fall into fainting fits, and become very sick when exposed to a cool air at the time of the eruption, who recover on being put to bed, and drinking warm mild liquors, and taking some gentle
cordial

cordial medicine ; which is contrary to what commonly happens, for many who have had bad symptoms when kept warm, have recovered on being exposed to a free cool air.

S E C T. III.

Of the inoculation for the small-pox.

AS it may sometimes be adviseable in winter-quarters to inoculate soldiers who have not had the small-pox, I shall here mention some few things relative to this practice.

Those who are to be inoculated ought to live for four or five days on a mild vegetable diet, and to keep themselves extremely cool, and go abroad every day when the weather will permit.

On the first day of the preparation they ought to take a dose of some mild purgative medicine ; and to repeat this the day before the operation is to be performed ; and likewise the day before the eruption is expected.

On the fourth or fifth days from their beginning the cooling regimen, the point of a lancet, moistened with the variolous matter of a ripe pustule, is to be introduced a
little

little way between the cuticle and true skin, on the outside of the arm, a little above the elbow ; and when the lancet is drawn back, the raised cuticle is to be pressed down with the finger, and no bandage or plaster applied ; and the same operation is to be performed in the other arm likewise.

As no bandage or plaster is applied, the inoculated part is at all times exposed to view, and we can judge of the progress of the infection from its appearance, and likewise in some measure of the nature of the future small-pox, and from thence be able in time to administer remedies adapted to the circumstances of the patient.

1. For if the small wound heals like a slight cut, without the least appearance of inflammation, or of any rising or pimple, and continues in this state for five or six days, it is judged that the infection has not taken ; and if the operation be repeated once or twice, and the wound always heals in the same manner, it is thought to be a certain sign that either the patient has had the small-pox, or that the constitution is such as not to be liable to catch the infection.

2. When a small pimple arises at the part, on the evening of the third or beginning of
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the fourth day, and this looks red, and afterwards rises into a watery vesicle, full of a clear lymph, on the seventh, eighth, or tenth day, and the inflammation then spreads round it, it is a favourable appearance, and prognosticates that the small-pox will be of a favourable kind, and few in number.

3. But if after the second or third day from the operation, the colour of the skin round the wound remains pale, and the edges of the wound scarce rise, without much redness, itching, or uneasiness in the part, and matters continue in this state till the fifth or sixth day, the appearance is judged to be more unfavourable, and there is reason to suspect a late and more troublesome disorder. In such cases, a dose or two of some mild purgative medicine has rendered the disease mild, and prevented danger. Many practitioners have mixed a few grains of mercury with the purgative medicine, from a belief that mercury is a corrector of the variolous virus; but as I observed before, I think that this fact is very doubtful.

From the time of the inoculation till the eruptive fever comes on, and during the course of the disorder, the patients ought to drink freely of some mild subacid liquor,
and

and if it runs high they ought to take a dose of some mild purging medicine, and live in a cool airy chamber ; and when the fever is over, to go abroad as before ; and during the course of the disorder, commonly little more is requisite than to continue the same regimen ; and when the disorder is over, and the pustules quite dry, and turned to firm scabs, to take some doses of a mild purgative medicine, to carry off any dregs of the disorder, or corrupted humours, which may have remained within the bowels. When physic has been given too early, while the pustules are yet full of matter, it has been observed frequently to bring on a shortness of breathing soon after, which terminates in a true phthisis pulmonalis ; and therefore it is right to delay giving medicines of this kind at this period, till the pustules are dry, and the disorder seems to be over.

Of late years the exposing patients to the open air in all weathers, even in the severest frost, has been strongly recommended by some practitioners ; but though from experience I have always found it right to keep the patients in a cool air, yet I think this is often carrying things too far, to expose them
to

to severe cold ; and I have observed it sometimes to do hurt.

With respect to purging medicines, the frequency of repeating them is uncertain ; but for the most part, a dose or two given before the eruption, as here recommended, is of use in cleansing the bowels ; and an old and able practitioner, David Middleton, Esq. serjeant-surgeon to his majesty, who has inoculated many hundreds without losing one patient, thinks that we ought never to omit giving the dose of physic immediately before the eruption is expected : for he says that he has observed that it commonly prevents convulsion fits, and other disagreeable symptoms, which often come on at this period, when nature is left to herself.

Whether mercury has any effect in counteracting or correcting the variolous matter, in the same manner as it does the venereal, I think is much to be doubted ; but where the bowels are suspected to be foul, or the patient to have worms, a dose or two of the pulvis basilicus, or of some other mercurial physic, may be of service.

C H A P. XXII.

Of erisypelatous swellings.

IN January 1762, several patients in the hospitals I had the care of at Bremen, were attacked with shining watery swellings of the face, or extremities; which came suddenly, and were attended with a slight degree of inflammation, and watery blisters rising above the skin, and some degree of fever. The blisters were not small, round, and angry, as in St. Antony's fire; but larger, and of an irregular figure, resembling those raised when people are scalded by boiling water. The swellings did not pit on being pressed, as the œdematous swellings commonly do: they gave pain when pressed, but the inflammation was not in that high degree as it is in the common phlegmon: the blood was fizy, and the water of a high colour. The disorder seemed to be a species of the erisypelas.

Between the 9th and 12th of January, three patients were seized with such swellings.

The first was a dragoon, who had just recovered from a flux, and a bad cough. On the 9th, he was suddenly seized in the night with a large swelling of his face, hands, and arms, which had a shining œdematous appearance with a small degree of redness, and was painful when pressed; and two or three watery blisters rose on the back of each hand above the division of the fingers, attended with a quick full pulse, a feverish heat and thirst, a cough, and somewhat of a difficulty of breathing, and high-coloured water; and he was inclined to be costive. He was immediately blooded, had a saline mixture with contrayerva and nitre, and was ordered to take a purge in the morning. Next day the blood had thrown up an inflammatory buff, the fever was abated, and the breathing easier; but the cough and swelling still remained. He then took a julep made of equal parts of the saline and spermaceti mixtures, which eased the cough. The fourth day the pulse was soft, and the swellings still in the same situation, and the breathing a little affected. A large blister was applied to his back, which discharged plentifully, relieved the breathing, and lessened the

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the swellings considerably. The cough and some degree of swelling still remained ; but were removed by the use of the sperma ceti mixture with oxymel, gentle opiates, and some doses of physic.

The second was a man of the twentieth regiment of foot, who had been some months in the hospital for a hectic complaint ; he was taken ill, the same night as the dragoon, with a swelling of his whole face, particularly of the lips, which had a shining watery appearance, and a slight degree of redness, attended with a strong fever ; and was cured by bleeding, purging, the use of the saline medicines, and the application of a blister.

The third was an invalid, who had been admitted for a pleuritic complaint, which he had got the better of. He was attacked, the second night after the other two, with a shining, watery, reddish swelling, of his right hand and arm, up as far as the joint of the shoulder ; four large watery bladders likewise appeared on the fore part of his arm, above the joint of the elbow. Bleeding, with the cooling medicines, and two doses of salts, carried off the fever, and lessened the swelling, in about seven days time ; but

a little of it, with a stiffness, still remained ; which at last was removed by the use of aromatic fomentations, rubbing with the linimentum saponaceum, and taking two doses of physic.

Within less than a fortnight, five or six more were seized with swellings of the same kind on some of the extremities ; and all got well by nearly the same treatment, excepting one man, who was in a very low state, and had a large deep ulcer on his hip, where there had been a mortification from his lying on that part in a fever. The swelling at first seemed to give way ; but on the third or fourth day, having got a severe cough, the swelling increased, and the inflammation began to look livid, and the discharge from the sore to look bad ; and, notwithstanding various means were used, a mortification of the part came on, and he died the seventh day.

C H A P. XXIII.

Of the scurvy.

S E C T. I.

*Of the causes of the scurvy; and of the places
where observed in Germany.*

THE true scurvy, attended with spongy fetid gums of a livid colour, with livid blotches, and ulcers of the legs, and other symptoms, began to shew itself at Bremen in January 1762; though we had not the least appearance of this disorder in the hospitals at any other place, while I was with the troops in Germany.

A great variety of disorders have been called by the name of scurvy: and the disease has been divided into hot and cold; into the acid, the alkaline, and the muriatic, according to the different fancies of authors, and the causes they imagined it took its rise from; but, from later and more accurate observations, Dr. Lind has justly remarked, that the true scurvy has been found to be the same in all the different parts of the globe, and to take its rise from similar causes; from cold and moisture, and living much upon salted provisions, joined to a want of fresh

vegetables, and of good, generous, fermented liquors; and hence it is most frequent in low marshy places, in northern climates, where there is a scarcity of fresh vegetables, and where the inhabitants live much upon salted provisions in winter; and aboard of ships in long voyages or cruizes, especially in the northern seas; and hence this disorder was so frequent at Quebec and Oswego, the first winters they were in our possession; and in some of the other forts in North America, which were taken so late in the year, that the troops had not sufficient time to lay in a stock of vegetables, and of fresh meat, to be preserved by the frost*; but were obliged to live mostly on ship's provisions. However, though the scurvy is most frequent in cold countries, yet it ought to be observed, that a want of vegetables is capable of producing it in every climate on the face of the globe.

* In Quebec, and other northern parts of North America, as soon as the frost sets in, they kill their meat intended for their winter store, and hang it up: it soon freezes, and will keep in this manner all through the winter; and when they intend to make use of it, they put so much as they want into cold water for some time, which draws the frost out of it; and then they boil or roast it, as they think proper. And they reserve vegetables in their cellars by putting them into sand.

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Formerly this disorder was believed to be peculiar to the northern climates, but daily experience shews, that the crews of ships, when exposed to the same causes, are liable to it in the East and West Indies, as well as in Europe: and Mons. Dezon † mentions its having been frequent among the French troops in Italy, in the years 1734, 5, 6.

It is observed, both at sea and land, that where the scurvy rages, those people are least subject to it who are well clothed; who live in dry habitations, or lie in dry births; who take proper exercise, without being too much fatigued, or exposed to the inclemency of the weather; and who live well, and drink good beer, cyder, or wine; as has been remarked by most authors.

That exercise is one of the best preservatives against the scurvy, and that none are so apt to fall into it as the lazy and indolent, has been confirmed by many examples. A surgeon to one of his majesty's ships of war informed me, that the crew of the ship he belonged to kept entirely free from this disorder during a long voyage, by their taking to dancing by way of amusement, while the crews of all the other ships in the

* See his Lettres, p. 365.

fleet had it frequent among them. Dr. Roup † says, that he has observed in the Dutch ships of war, that the boats crews were always less subject to the scurvy than the other men, owing to their using more exercise; and that the marines, who have little to do aboard a ship, were oftener afflicted with it than the seamen.

At Breiten the disorder was only observed among the soldiers; not one of the gentlemen belonging to the hospital, or to the commissariate, nor one of the military officers, not even of the serjeants, having the least symptom of it. The reason of its being frequent among the soldiers was, that the place is situated on a plain naturally very damp; and the soldiers were quartered in very low damp houses; at the same time, no vegetables or greens were to be bought in the market; and fresh meat, and other fresh provisions, were at so high a price, that the soldiers could not afford to buy them, but were obliged to live on salted meat and salted herrings, during the winter; and what little money they had remaining, they laid out on spirituous liquors, which were sold cheap.

† See his *Treatise De Morbis Navigantium*, cap. ii, sect. 2, p. 100, &c.

S E C T. II.

Of the cure of the scurvy.

THE cure of this disorder, and in a great measure the prevention of it likewise, requires—living in a dry, comfortable, well-aired place—good clothing—light food of easy digestion, such as good bread, panada, milk, whey, broths made of fresh meats, and roots or greens—white meats, with greens, or other vegetables, &c. and the use of mild acid or acescent liquors for drink, such as lemonade, small beer, cyder, wine and water, or weak punch *; and, by way of medicine, gentle purges, mild diaphoretics, bitters, and the bark; and the free use of acid or acescent fruits, such as lemons, oranges, apples, pears, currans, grapes, &c. when they can be got; and of the antiscorbutic plants and their juices, as sorrel, succory, endive, water-creffes, scurvy-

* The free use of raw spirits is found to be very prejudicial; but a moderate quantity of these spirits, diluted with water, and acidulated with lemons or oranges (or with cream of tartar, or tamarinds, when the former cannot be got), and made into punch, is found to be a good antiscorbutic.

grass,

grafs *, &c. Experience has taught us, that on the use of these things a great part of the cure principally depends; and that often the most inveterate scurvies are cured by the use of greens and fruit, without the assistance of other remedies.

The spruce beer has long been an approved antiscorbutic; and the late Dr. Macbride first recommended wort made with malt, from its containing a great deal of fixed air, as a good remedy both for preventing and curing the scurvy; and it has been found of

* Most ripe fruits, particularly lemons and oranges, and esculent herbs, and many kinds of roots, such as horse-radish, onions, leeks, and many others, have been found the most useful remedies in the cure of the scurvy. Decoctions and infusions of fir-tops, of spruce, and of other species of the pine-tree; and beer made of these infusions, by fermenting them with molasses, are approved antiscorbutics; and when such remedies cannot be got, infusions of the common bitters, and weak punch, made with tamarinds or cream of tartar, have proved serviceable; and where these acids cannot be had, the mineral acids may be used for acidulating the drink. However, it ought always to be remembered, that fresh vegetables and fruits, and vegetable acids, produce much better effects in the scurvy, than any other sorts of remedies; and ought always to be used, when they can be got.

Most of the common bitters have been strongly recommended in this disorder, gentian, trefoil, wormwood, &c.—as likewise aromatic bitters and aromatics, such as *calamus aromaticus*, carvi seeds, Winter's bark, cinamon, and many others.

use

use in voyages to the East Indies, and in Captain Cook's voyage round the world.

The late Dr. Mounsey, formerly physician to the empress of Russia, in April 1772 informed me that the scurvy had been often frequent, and raged with great violence among the Russian troops in winter, particularly when they were quartered in Finland, during the war with Sweden; and that he had tried the most famed antiscorbutic remedies that could be procured at that season of the year in these northern climates, such as vinegar, beers of different kinds, pickled vegetables, decoctions of tops of fir, and of other species of the pine kind, juniper-berries, and variety of other things; but that he had found no remedy so useful as a strong infusion of horse-radish, drank the length of half a pint, twice, or sometimes thrice a-day.

Bleeding is seldom requisite, except where there is much heat or fever; or a sharp pain of the side, or difficulty of breathing, or some symptom of the like kind; it is then sometimes necessary to take away some blood. In obstinate cases, it is often found of use to promote sweats, by making the patient, while in bed, drink freely of warm whey,

whey, or sack whey, mixed with the scorbutic juices ; or warm barley-water, or the like, mixed with a small quantity of the antimonial wine, or some other mild diaphoretic.

And where the patient is strong, and there is no danger of hæmorrhages, warm aromatic baths have sometimes been found serviceable ; but they are not to be used where the patient is weak.

S E C T. III.

Of the means to be used for preventing the scurvy in long voyages.

TH E means recommended by Dr. Lind, I formerly mentioned in treating of the methods proper to be used for preventing this disorder, and preserving the health of men aboard of transports, which seem to have answered beyond the most sanguine expectation in Captain Cook's voyage in his majesty's ship the Resolution, round the world, which took up three years and eighteen days ; for during that time he did not lose one man of the scurvy, and but one of other diseases,

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By Captain Cook's own account *, the methods he principally used for preserving the health of his men were these :

1. He put his men at three watches, except on particular occasions; so that they were not so much exposed to the weather as if they had been at watch and watch.

2. Care was taken to expose them as little as possible; and that they had dry cloaths to shift themselves when wet.

3. Proper methods were employed to keep their persons, hammocks, bedding, cloaths, &c. constantly clean and dry; and equal pains were taken to keep the ship clean and dry between decks.

4. Once or twice a-week the ship was aired with fires; and when this could not be done, she was smoaked with gun-powder moistened with vinegar or water.

5 A fire was frequently made in an iron-pot in the well, which greatly purified the air in the bottom of the ship; for the least neglect in this point always occasions a putrid offensive smell below, which nothing but fires will remove.

* See Captain Cook's own Account, in Philosophical Transactions, vol. lxvi, art. 22. p. 402.

6. Wind-sails were often used to renew the air below decks, especially between the tropics.

7. Proper care was taken of the ship's coppers, so that they were kept constantly clean.

8. Captain Cook, contrary to the common practice of mariners, always took in fresh water where it could be procured, even when it did not seem to be wanted; by which means he had always plenty of wholesome water on board, and never any that had been kept long, so as to become putrid; which is the common case in long voyages, where this method was not practised.

9. Whenever he came to any sea-port or harbour, he endeavoured to procure his men every sort of refreshment, either of the animal or vegetable kind, that could be got; but he never suffered the fat boiled out of salt beef and pork to be given to his people, as customary; being of opinion that it promotes the scurvy.

Before leaving England, extraordinary attention had been paid by the admiralty, in causing such articles of provision to be put aboard as were judged to tend most to the
pre-

preservation of the health of the seamen ; which were,

1. A large quantity of malt, of which was made sweet wort ; which was given from one to three pints a-day to the men who were judged to be most liable to the scurvy. Captain Cook thinks this a good remedy to prevent the scurvy ; but does not think that it will cure it in an advanced state at sea.

2. Sour krout, of which each man had, when at sea, a pound twice a-week.

3. Portable soup, of which each man had an ounce three times a-week, that was boiled with their pease on ship board at sea ; and was made into soup, with oatmeal and wheat, or fresh vegetables, ashore, or when they could be procured.

4. Rob of lemons and oranges, which the surgeon found useful in several cases.

5. And the ship was furnished with sugar in room of oil, and with wheat instead of much oat-meal ; and Captain Cook says the crew were certainly gainers by the exchange.

Such are the means Captain Cook mentions that he had used for the preservation of the health of his men. Of the articles ordered to be put on board his ship by the admiralty the captain seems to have a good opinion

opinion of the malt; and therefore in future voyages, not only malt, but the Quassi loaves made of malt and rye or oat-meal, which we formerly mentioned to be used in the Russian armies, if they will keep on ship-board, will prove a good article to be carried to sea on board of ships of war and of transports.—'Portable soup, he thinks, extremely useful, and seems to have a high opinion of the sour kroust; but does not speak much in favour of the robs, or inspissated juices of lemons and oranges as antiscorbutics; "for, he says, "though they may assist other things, I have "no great opinion of them alone."

In place of these robs, or inspissated juices of fruit, if a marmalade of oranges prepared in the following manner was laid in, it would certainly be found to be a better antiscorbutic.

Receipt for making marmalade of oranges for the use of shipping.

Take a hundred dozen of bitter or Seville oranges; grate the rind off one half, and pair it off the other—cut the paired half into long chips, and boil them soft in fifty quarts of water, then strain off the water
from

from the chips and keep both—then take off the white skin of the oranges and throw it away, and put the peeled oranges either into large wooden mortars, and break and bruise them well with a large pestle ; or put them into large tubs, and let them be mashed in the same manner as the grapes are in making wine—then throw the whole into large sieves, and with proper spoons press through the juice and pulp, leaving the seeds and membranes behind.

Then mix all the pulp and juice, and boiled chips and grated rind, with a quantity of coarse brown sugar equal to the weight of the whole, and add nineteen quarts of the water in which the chips had been boiled, and boil the whole for half an hour or longer till it come to the proper consistence of a marmalade, stirring it about perpetually with a proper spoon while it is boiling—when prepared, pour it into stone jars, which let stand open all night, and next morning cover the marmalade with white paper dipped in spirits ; cork the jars and cover them with leather, and keep them for use.

This marmalade certainly contains much more of the virtues of fresh fruit than their inspissated juices, and as the fruit is combined with sugar, the great promoter of the vinous

and acetous fermentations, it will certainly be found on trial, to be a much more powerful antiscorbutic, than any preparation of fruit hitherto used in the royal navy. It will keep good for two or three years, and I should think if it was prepared in the West Indies where oranges grow, and the coarse sugar is made, that it might be had at a cheap rate.

It should appear from Dampier's Voyages*, that the Spaniards in the West Indies and South seas used to carry marmalade of fruits with them as part of their sea-stores; for he mentions large quantities of it being found aboard of several of the prizes taken by the fleet of privateers he belonged to.—In the year 1681, they took a ship of 12 guns and 40 men, near to Carthagena in South America, and found eight or ten tons of marmalade on board.—In the year 1684, they took a vessel near the island of Lobos in the South seas, bound for Lima, in which there were between seven and eight tons of marmalade of quinces.—And in the year 1685, they took a vessel of 90 tons from Truxillo, and bound to Panama, in which there were a few boxes of Marmalade*.

* See Dampier's Voyages, vol. i. 4th edit. pages 45—99— and 174.

The common fruit used for making of marmalades have been oranges or quinces; but if other fruits should upon trial be found to keep equally well, they may be used in their place. Perhaps, apples beat into a pulp, and mixed with grated orange rind and some of the juice, may be made into marmalade in the same manner as the oranges; and in this country may be afforded at a cheaper rate than when made with oranges alone.

S E C T. IV.

Cases of patients at the hospital at Bremen, and in St. George's hospital, London.

THE first time I saw this disorder at Bremen, was in an old invalid, James Long, who had come from Bristol to Embden, and from thence to Bremen. He was some weeks in the hospital before I discovered his disorder to be the scurvy. He at first complained only of great weakness, and such a giddiness, when he got out of bed, that he could not walk, and of what he called flying rheumatic pains of his legs. He had no other visible complaint; all which, I imagined, proceeded from old age, and being worn out in the service. At last, on

the 25th of January, he complained of his gums being sore ; and on examining them, I found his breath fetid, his gums swelled, soft, and spongy, his legs covered with scorbutic blotches, and other symptoms, which evidently proved his disorder to be the true scurvy.

Upon which, I ordered him a low diet, with the addition of greens for dinner, and a quart of lemonade, with a gill of brandy in it, per day, for his common drink ; and, by way of medicine, a decoction of the bark, with the elixir of vitriol ; and, at the same time, ordered his gums to be scarified, where they were most swelled and spongy ; and to be washed frequently with an astringent gargle ; and to be rubbed now and then with burnt alum *. By these means, in a fortnight's time

* Dr. Lind, who has wrote one of the best treatises on this disorder, and who had a great deal of practice himself, says, “ When first the patient complains of an itching and a spon-
“ giness of the gums, with loose teeth, either a tincture of
“ the bark in brandy, or aluminous medicines, will be found
“ serviceable in putting a stop to the beginning laxity of these
“ parts.” When the putrefaction increases, he recommends the use of some of the mineral acids. See his Treatise on the Scurvy, part ii. chap. v. p. 201.—Van Swieten says, he never found any thing answer better than a gargle made of four ounces of elder or rose-water, acidulated with a drachm of the spirit of sea salt ; and where the gums were very putrid and
gau-

time, his gums became firmer, and his scorbutic symptoms decreased. During that course he took cold, and had a stitch in his side, for which he was blooded. The blood threw up a very thin buff, which was not of a firm consistence †; the crassamentum below

gangrened, he has been obliged to touch them slightly with the pure acid spirit, and some hours after to have them washed with the gargle just mentioned. Vide Comment. vol. iii. p. 629, sect. 1163.

If the spunginess of the gums sprout out into a luxuriant fungus, it is sometimes requisite to cut such funguses away, and to wash the sores frequently with gentle astringent or acid liquors.

† Dr. Huxham observes, that, after the disease has continued some time, the blood appears a mere gore as it were, not separating into serum and crassamentum as usual, but remaining an uniform half-coagulated mass, generally of a more livid or darker colour than common; though sometimes it continues long very florid; but it always putrifies soon. See his Essay on Fevers, chap. v.

There is something very particular in the nature of this disorder, according to an observation of Dr. Lind's; who says, "That the scurvy is a disease in its nature very opposite to that of a fever; insomuch, that even an infection is long resisted by a scorbutic habit; and those of a scorbutic habit being seized with the fever, was a proof of its proceeding entirely from infection. See his first Paper on Fevers, p. 4. And Dr. Roup says, "Vidi quidem homines, qui scorbuto leviter erant affecti synochum putridam contraxisse, sed neminem qui confirmato scorbuto erat conflictatus vidi febre correptum, ut (sect. xii. No. 6.) dixi, & ratio patet ex se ipso." See his Treatise de Morbis Navigantium cap. ii. sect. 2. p. 143, &c. However, in p. 162, &c. he mentions five or six scorbutic patients who were attacked with

low was of a blackish colour and of a loose texture, and the serum in a large proportion. By the 2d of March his gums had recovered their natural firmness and texture; and the scorbutic spots and pains of the legs were gone, and he had recovered his strength; the only remaining complaint was a little swelling about the ankles, for which he continued the same course, and took a dose or two of physic. By the 16th of March all these symptoms were gone; and he was dismissed the hospital free from all complaints. I saw him well the last week in May; and he told me, he had had no scorbutic symptom since he left the hospital.

In the beginning of February, another of the invalids, who had been in the hospital for a fever and rheumatic complaints, had blotches appear on his legs, complained of great weakness, and fainted away in attempting to walk; which made me suspect his disorder to be the scurvy; and, on examining him, I found his gums soft and spongy, attended with the other symptoms of the

this fever.—In p. 162, he says; that the blood of scorbutic patients is in a very different state from that of people labouring under putrid fevers; for he alledges that the one is thick, the other thin and dissolved; and that the one is acrid, and the other sweet,

true

true scurvy. I put him nearly on the same course as that mentioned in the last case: he used a low diet, with the addition of greens for dinner, which he eat with a little butter and vinegar; and he had a quart of lemonade, with two ounces of brandy, for his common drink during the day; and, by way of medicine, a decoction of the bark, with two drachms of the confectio cardiaca to each half pint, which he took by spoonfuls. Next day he complained of a pain in his leg; and, on examining it more particularly, I found a large livid blotch, yellow all round the edges, on the fore part, and a tension all over that leg. As he was so extremely low as to be in danger of fainting whenever he sat up, I was afraid lest a mortification should ensue; and therefore ordered his leg to be bathed morning and evening with a warm aromatic fomentation, and a poultice of theriaca to be applied after it; and desired him to take as much of the decoction of the bark with the cordial as possible; and allowed him a glass of mountain wine every two or three hours. By the continuance of this course for some weeks, the livid blotches, pain and stiffness of his leg, and most of the other scorbutic symptoms, went away; his gums were re-

stored to their natural firmness; and he recovered his strength so much as to be able to sit up all day long; though he still remained very weak when he was sent to England, in March.

In February and March, seven or eight more scorbutic patients were sent to the hospital I attended, who were all treated in the same manner; and all did well. About the middle of February this distemper began to shew itself in the other hospital attended by Dr. Miller, who treated the patients nearly in the same way, and they all recovered.

On the 5th of April, a young man, belonging to the eighth regiment of foot, came to the hospital with all the symptoms of the true scurvy; his gums were spongy and fœtid; he had livid blotches on his legs, and contractions of the hams, and a stiffness and hardness in the calves of both legs*. By following the same course as the others, and

* If the swellings become large, stiff, and painful, Dr. Lind recommends that the legs should be frequently bathed and fomented; or, what he has found preferable, to be exposed to the steams of warm decoctions, after being well covered with blankets. After this operation, he advises the limb to be rubbed with some mild oil, such as oleum palmæ, or salad oil; and if the swellings resist both the general cure and these applications, that the limbs be sweated with spirits. See his Treatise on the Scurvy, part ii. chap. v.

the use of frequent fomentations, and rubbing the contracted parts with soft liniments, he mended daily ; and after taking a dose or two of physic, was dismissed perfectly recovered on the 10th of May. At his first admission into the hospital, he was taken with a severe cough, attended with pain of the breast, and a spitting of blood for a day or two, for which he was blooded. His blood threw up a little buff; the crassamentum was of a blackish colour and of a loose texture, with a good proportion of a yellowish serum. This bleeding relieved the complaints of his breast, and he had no return of them while he remained in the hospital.

The first week in May four invalids were admitted into the hospital for this disorder. The first had spongy gums, a fœtid breath, his legs were swelled and hard, and of a deep ple colour. The second was a case at first of a more doubtful kind; there were no spongy gums, though an offensive breath; his ancles and feet were swelled, attended with pain and uneasiness, and a great weakness and lassitude; but no fever, nor any livid blotches. The swelling of the feet and ancles seemed at first sight rather gouty or rheumatic, than of the scorbutic kind; but
from

from the man's way of life, and the disorder being so frequent, we discovered it to be the scurvy. The third had a very foetid breath and spongy gums, livid spots and fungous ulcers* on his legs, with pains and weakness all over. The fourth had also spongy gums and a fetid breath, pains of the legs and arms, livid blotches on his legs, great hardness and contraction of the right ham, and a livid hard swelling on the outside of the left thigh, immediately above the knee.

We treated them all four in the method above mentioned, adding a mess of greens to dinner, giving lemonade for drink, and the bark, with elixir of vitriol, by way of medicine. The parts that were hard and swell-

* "Ulcers on the legs, or on any other part of the body, require pretty much the same treatment, viz. gentle compression, in order to keep under the fungus, and such antiseptic applications as have been recommended for putrid gums, viz. mel rosar. acidulated with spiritus vitrioli, ung. Ægyptiacum, &c. but nothing will avail where the patient cannot have vegetables and fruits." Dr. Lind's Treatise on Scurvy, part ii. chap. v. p. 204. And he recommends, if the swellings and ulcers of the legs neither yield to the general cure nor to the methods here proposed, that a slow and gentle course of mercury should be tried, after the scorbutic taint is a good deal removed, and the gums are sufficiently firm; and to give along with it a decoction of the woods, or of sarsaparilla; but this method ought not to be attempted till the gums have acquired a proper firmness. See *ibid.* part ii. chap. v.

ed, were fomented, and rubbed with soft liniments, and poultices were applied to the hard swelling on the outside of the left thigh; and the ulcers of the legs dressed with digestives, and occasionally washed with spirituous tinctures, and touched with escharotics. Before I left Bremen, the first week in June, the first and second patients were perfectly recovered, and the third and fourth almost well. All of them had had the disorder some months before they came to the hospital.

The true scurvy, with spongy fetid gums, is very seldom to be met with in London, except among the seafaring people below bridge; for since my return from Germany, I have only seen four people with this complaint; one of whom was a Frenchman, a Spitalfields weaver by trade, who from his infancy had had an aversion to every thing of the vegetable kind, and had lived almost entirely on animal food. When between 35 and 36 years of age, he was taken with pains of his joints and bones, and his ankles swelled and became red, and covered with a livid rash; and he felt a stiffness in the joints of his knees and of his fingers; and his disorder was believed for some months
by

by the people who attended him to be a rheumatic gout, and it was treated as such.—At last, having spent the little money he had, he came with a recommendatory letter to St. George's hospital, and was admitted into the house as a patient, under my care; on examining him more particularly the second day after his admission, I thought that the swelling and eruption about the ancle appeared to be of the scorbutic kind; and on his telling me his way of living, I examined his gums, and found them to be swelled, soft, and spongy, and his breath to have a fetid smell. I then made no doubt about the nature of his disorder, and after giving him a dose or two of laxative mixture, I put him on the following course. He took two ounces of the decoction of the bark, with with ten drops of elixir of vitriol three times a day; he was put on the low diet of the hospital, and had every day with his dinner either a plate of greens, or of roots, and drank small beer to his victuals; and had besides a quart of four punch, with only two ounces of brandy in it, which he was desired to drink through the day. By following this regimen for five weeks all his complaints were removed, and he was dismissed the hospital

pital in good health ; but in about six months afterwards I was informed, that about three months after leaving the hospital he had returned to his old meat diet, and had been taken ill of a putrid fever, of which he died the ninth or tenth day.

S E C T. V.

Of a disorder of the scorbutic kind, called by Dr. Werlhoff, morbus maculosus hæmorrhagicus, or the spotted disorder attended with hæmorrhage.

BESIDES the four patients ill of the true scurvy, I met with two afflicted with a disease which seems to be of the scorbutic kind, and in many particulars resembles it when in an advanced state.—I mean that disorder in which livid vesicles filled with blood appear in the mouth ; and little livid and black spots, resembling petechiæ of a bad kind, are observed on the legs, arms, and other parts of the body ; and the blood is so dissolved as to pass by the different emunctories ; and the patient to be subject to hæmorrhages from the nose and mouth ; and to pass blood by stool, and mixed with the urine ;
and

and women to be subject to profuse discharges of the catamenia.

The first patient I saw was a young man about nineteen years of age, seemingly of a healthy constitution, and living on a wholesome diet, made up of vegetable and animal food, who, without any visible cause, after complaining for some days of a lassitude, had vesicles full of black blood come in his mouth, and a number of very small livid spots resembling petechiæ of a very bad kind, on his legs and arms; and on the second day he was attacked with a profuse hæmorrhage from the nose; and on the third day passed blood mixed with his urine and stools. On the first attack he was blooded, and had a dose of cooling physic, and then he was ordered to take the bark freely, to have all his drink acidulated with the spirit of vitriol, to live entirely on a vegetable diet, and to eat freely of oranges; by this course a stop was put to his disorder in a fortnight's time, and he very soon after recovered perfectly his health; the particulars of this case I read at a meeting of the College of Physicians, and it has been since published in their second volume of Medical Transactions.—The other case had a more unfortunate termination.

mination—A lady of a delicate scorbutic habit, wife to an officer, after a fright was attacked with a profuse discharge of the catamenia and a fever ; for which she was attended for the first ten or twelve days, by the surgeon of the regiment to which her husband belonged ; but the fever continuing, and she being attacked with a bleeding from the gums, I was sent for. On examining her gums, I found them soft, and spongy, and swelled at the part from which the blood came, and observed some small black vesicles on the inside of her cheeks ; and on examining her neck and arms saw some small livid petechial spots on them ; and a large livid mark like a bruise on her fore-arm, which she told me came from her maid taking hold of her by the arm, to assist her in rising up in bed. Her tongue was whitish, but she did not complain much of thirst ; her breath had no fetid smell, and her pulse was low and weak, and beat 120 strokes in a minute. She was regular in going to stool, and I was informed that her stools seemed natural, without any mixture of blood. From every appearance it was evident that her blood was in a very dissolved state ; and that her disorder was of the scorbutic kind I am now treating
of,

of, attended with fever. I was informed that all her family were of a scorbutic habit, and that some of them had died of low putrid fevers in which scorbutic symptoms had appeared.

Before I saw her, she had had medicines of different sorts; after giving her an opening medicine to clear the bowels, she was desired to continue the use of the bark, which she had been taking before I was called to see her, and between whiles she was ordered to take some spoonfuls of a saline julep made acid, and some of the *confectio cardiaca*; and to live entirely on a vegetable diet; to eat freely of the summer fruits, and to have her drink acidulated with spirit of vitriol; however, her disorder went on, notwithstanding the use of the above, and variety of other medicines that were tried. The bleeding from the mouth continued; black vesicles appeared on the roof of her mouth, and the black, or livid petechiæ on her arms and neck increased in number, she grew weaker daily, and at the end of five weeks from the beginning of her disorder, her tongue became parched and dry, she became comatous, and lay insensible for twenty-four hours before her death.

I have

I have found no account of this disorder any where but in the works of the late Dr. Werlhoff, who was physician to his majesty at Hanover; where it is called the morbus maculosus hæmorrhagicus; and the history of two cases of it are related; one by Dr. Augustus Behrens, in an epistolary dissertation to Dr. Werlhoff, which ended unfortunately; the other of a girl, by Dr. Werlhoff himself, which was extremely similar in most of the circumstances to the first case I mentioned; and was cured by the bark.

C H A P. XXIV.

Of the lues venerea.

S E C T. I.

Of the time when first observed in Europe.

THE lues venerea is one of those disorders which is communicated by infection, and as that happens most commonly from intimate familiarities between the sexes, it has from thence been called the venereal disease; though it may be communicated in other ways. It may be conveyed from parents to their children—from an impure nurse

to a clean child—from a tainted child to a clean nurse—from some of the matter of venereal sores, or of a gonorrhea lying long on any of the spongy parts of the body, or getting into a cut or sore on the hands of surgeons, midwives, or nurses.—And at whatever part the infection is received, its effects generally appear first there; and its progress may be traced from thence along the course of the lymphatic veins and glands going from such parts to where they discharge their contents into the general mass of blood.

It seems not to have been known in Europe before the year 1494, when it is alleged to have been brought by the Spaniards from America.

It is true, indeed, that long before this time, there was a disease in England known by the name of the *brinning* (burning), which very much resembled the dysuria in a virulent gonorrhœa, which W. Becket *, in the Philosophical Transactions, argues to have been it; but from the accounts given of the *brinning*, it is now more generally believed to have been a species of the leprosy or scurvy than the lues venerea.

* Philosophical Transactions, N°. 357, and 365.

The first European who laboured under the lues venerea whom we have any account of, was one Peter Margarit, a nobleman of Catalonia, who went with Columbus in his second expedition into America, and contracted it in the island of Hispaniola, where Columbus first landed; and being sent home to Spain about the end of the year 1494, brought it along with him.

In the year 1495, John Aguado was sent from the court of Spain to try Columbus for some crimes, laid to his charge in the island of Hispaniola; and returned to Cadiz about the end of the same year, with 200 soldiers who had been in the West Indies for some time, and were all infected with this disorder.

In the following year 1496, when Naples was besieged by the army of Charles V. of France, it began to rage in both armies; and as it was never before known to either nation, the French gave it the name of the Neapolitan disease; and the Neapolitans called it by the name of the French; though it is generally believed that the French got it from the Spanish and Neapolitan women, who frequently stole out of the city to their camp in the night time.

After the French returned from the siege, by their commerce with other nations, they soon spread it through Germany, Holland, and the rest of Europe; and so quick was its progress, that it was raging in Scotland in the year 1497; for among the records of the city of Edinburgh there was found some years ago, a proclamation of James IV. of Scotland, and his council, dated the 11th of December 1497, commanding, that whoever found himself afflicted with that strange and loathsome disease, lately come amongst them, called the *grand gore*, (the venereal disorder) should immediately repair to the sands of Leith, where boats should be ready to transport them to the island of Inchkeith, or some distant corner over the Forth, there to remain till God should send them relief; which if they did not, they were to be burnt on the cheek with a hot iron, and banished the city for three years.

The first author who treats of this disease is one Josephus Grandbeckius, a German physician, who, in the year 1496, wrote a treatise *De Pestilentia Scorrha, sive de Malo de Frantzis*; where he says, “*Malum esse*
“*tam cito in homines dimissum, ut plaga*
“*cælitus*

“cælitus decussa videretur. Novum esse
 “morbi genus, naturæ invisum, quod a Deo-
 “rum immortalium arce in Gallos dimissum
 “fuit, horribile terribilissimumque portentum
 “omnibus mortalibus, inauditum invisum
 “ac prorsus incognitum.” And since him
 innumerable authors have wrote on the same
 subject.

This disease seems to have raged with
 more violence at its first appearance, than at
 present ; and to have gradually become milder
 since that time ; but whether this has hap-
 pened from the disease itself really becoming
 less virulent, or to practitioners having be-
 come better acquainted with proper methods
 for stopping its farther progress, and of cur-
 ing it, I cannot determine.

The venereal disorder appears in different
 forms—where there is a discharge of a thin,
 greenish, bad concocted matter from the pri-
 vate parts of either sex, it is called a gonor-
 rhœa—where it affects the inguinal or axil-
 lary glands and causes them to swell, it is
 called bubo—where it shews itself in form
 of an eating ulcer about the private parts,
 it is called chancre—and when the virus is
 absorbed into the blood and causes ulcers in
 the throat, eruptions on the skin, pains of

the bones, &c. it is called a confirmed lues venerea, or pox. — And the various symptoms, according to the parts they attack, and shape they assume, have been called by different names; venereal ophthalmia, nodi, tophi, gummi, &c.

S E C T. II.

Of the gonorrhœa.

THE most frequent form in which this disorder appears is the gonorrhœa, or discharge of thin, greenish, purulent-like matter, from the urethra in men, and from the vagina in women.

In men it has been divided into four different species, according to the supposed seat of the disorder, or the place of the urethra from whence the discharge comes. — 1. From near the point of the urethra. — 2. From about an inch above it. — 3. From the whole tract of the urethra, up to Cowper's glands. — 4. From the prostate glands, and neck of the bladder. — But these seem to me to be unnecessary distinctions, the nature of the disease being the same in all, and requiring
nearly

nearly the same manner of treatment; as does the gonorrhea spuria, or discharge from the inside of the prepuce and the outside of the neck of the glans penis, when it proceeds from a venereal cause, which is not always the case.

The first symptoms of a gonorrhea, (or running) in men, shew themselves by a kind of itching at the end of the yârd, and a very small discharge of a clear watery liquor, or of a yellow green coloured lymph, which in a very short time increases in quantity, and puts on the appearance of a very thin, greenish, badly concocted pus; and this discharge is commonly attended with more or less of a heat and pain in making water; which sometimes, where the disease is violent, increase to such a degree as to occasion a dysuria, or even a strangury.—After the heat and pain in making water come on, the patient has frequently, particularly when warm in bed, a cordée, or painful involuntary erection of the penis, attended with a distortion or bending of that member.—And where the gonorrhœa is violent, it is sometimes attended with a swelling and redness all along the perinæum, or with a swelling of the nut,

or of the whole yard; and at other times with a phymosis or paraphymosis*.

The heat of urine and cordée differ much in the length of their duration; for sometimes they go off very soon, and at other times continue long; for the most part the pain and heat in making water go away before the cordée, and both before the running. The running, after its first appearance, generally increases in quantity, and becomes more of a greenish yellow colour for some days, after which it continues for three, four, five, or six weeks, or sometimes for months, without changing much either in quantity or appearance, and then it begins to lose that green colour, and to become more like good pus, and thicker, and turns ropy, especially in a morning; after which it gradually lessens in quantity, and becomes clear and viscid like to the white of an egg, before it stops entirely; though in some it diminishes gradually in quantity, without

* When the prepuce covering the glans penis, inflames, swells, and contracts, so that it cannot be brought back to uncover the glans, the disorder is called a phymosis.—And when the prepuce happens to be above or behind the glans, and inflames and swells so in that situation, that it cannot be again brought over the glans, it is called paraphymosis.

much

much change of colour till within a few days of its stopping altogether.

The seat of the disorder, in the greater number of gonorrhœas, is in the urethra, not an inch from the end of the yard ; though frequently the venereal virus insinuates itself a good way higher up, and sometimes even so high as to affect the prostate and Cowper's glands, and parts very near to the neck of the bladder ; and it has been known sometimes to affect the ductus feminiferi, as they open into the urethra.

In women, the appearances of the matter discharged in the gonorrhœa is similar to that in men, and the seat of the disorder in them is, the cellular membranes and little glands of the vagina, the glandulæ myrtiformes, Cowper's glands, the prostrata, and sometimes likewise the cellular membranes, and little glands of the urethra.

Such are the most common symptoms of a gonorrhœa, of which the running, or discharge of purulent-like matter from the urethra in men and from the vagina in women, is the pathognomic, or that which distinguishes it from other venereal maladies. Of late it has been much disputed among practitioners how the gonorrhea is produced ;
whether

whether by the virus *venereum* corroding the internal surface of the urethra or vagina, or only by its irritation, when lodged in the cellular membranes and glands of these parts, creating a slight degree of inflammation without any ulcer, and a consequent increased secretion of the liquors which lubricate the internal surface.

The first opinion was formerly generally received as the true one; but for some time past the latter seems to have gained ground, from the following observations:—1. From practitioners observing no ulcers in the vaginas of women labouring under a gonorrhœa simplex. — 2. From the appearance of the gonorrhœa spuria in men, where there is a discharge of such matter from the neck of the glans penis below the prepuce, as usually comes from the urethra, without the appearance of any ulcer. — 3. From the increased secretion of liquors from the nose in a catarrh, where there is no ulcer.—4. From the running often stopping suddenly. — 5. And from no ulcers having been observed, on dissection, in the urethras of some people who have died with a running upon them.—From all which facts it is now generally believed, that the running may, and commonly is produced,

duced, without the existence of any ulcer ; at the same time that it cannot be denied that the venereal matter has frequently eroded the urethra, and formed ulcers * there, since we have the histories of dissections related, where such ulcers were found by anatomists and physicians whose testimony cannot be doubted.

Several practitioners have been of opinion, that a gonorrhœa never terminates in a confirmed pox, where there is a free discharge by the running, and where this discharge ceases by slow degrees ; and others have gone still farther, and affirmed that a pox never was the consequence of a gonorrhœa. However, I believe that both these opinions are

* Thomas Bartholini, in the *Ephemerides Germanicæ*, cent. ii. hist. 36. A. D. 1654, has these words :—“ In omnibus gonorrhœa laborantibus in nosodochio dissectis ulcera reperivi, seu callum ulceris præteriti signum ;” and adds, “ Marcus Aurelius Severinus Neapoli in Gonorrhœa laborantibus dissectis invenit inflammationem & abscessus in parastatis.” — For similar accounts see Bonetus’s *Sepulchretum Anatomicum*, & Littre, in the *Memoirs of the French Academy of Sciences* for the year 1711, and other authors.—And from the effects we see virulent pocky matter have upon the external parts, there can be no doubt of its often eroding the fine internal villous coat of the urethra. And every physician and surgeon, who has attended any of the London hospitals, must have seen many patients apply for advice for fistulas in perineo, and other ulcers of the urethra, which have penetrated through its substance, and allowed the urine to pass.

erroneous ;

erroneous; for although it is not often that a pox follows a simple gonorrhœa, yet I have met with several instances of poxes, where the patients have informed me that they had originally only a simple gonorrhœa, which was seemingly cured in a regular manner by their surgeons, and where the running had gone away in a kindly manner by slow degrees; and that they had no reason since to suspect their having received any fresh venereal infection. And I have seen repeated instances of confirmed poxes following the stoppage of gonorrhœas, both where the running has stopped of itself, and where it has been stopt by means of astringent remedies.

Of the cure of the gonorrhœa.

In the cure of this disorder, the first thing to be attempted is the removal of the inflammatory symptoms; which is principally to be affected,—1. By bleeding, if the pain and heat in making water is violent; and by making the patient take some doses of mild cooling physic, such as salts, or a solution of manna and tartar solubilis, or lenitive electary, with a little jalap and nitre, or the like; at the same time that he lives upon a
light,

light, easy digested diet, composed mostly of broth, soup, pudding, fruit, mild vegetables, and plain boiled or roasted meat; and drinks freely of soft, mild, cooling liquors, such as whey, milk and water, orgeate, almond emulsion, linseed tea, or the like; and that he avoids the use of salted or high-seasoned food, and of spices, or other heating things; and abstains from drinking vinous and spirituous liquors, and from using violent exercise, or doing any thing that will help to increase the heat and momentum of the blood.

Where the inflammatory symptoms are violent, it is necessary to join the use of nitre, and of the other cooling antiphlogistic remedies, and sometimes to apply to the parts emollient or discutient poultices; or to bathe and foment them frequently with warm aromatic decoctions.

After the violence of the inflammation in the urethra is abated, the next thing to be attempted is, to put a stop to the running, and to free the patient of all venereal infection.

The common internal remedies employed for this purpose have been those of the purgative and mercurial kind.

Formerly

Formerly the practice was, to give a large dose of calomel, (merc. sublim. dulc.) or of some other mercurial preparation, at bedtime, and to purge it off next day with a dose of pilulæ cochæ, or of some other strong purgative medicine; and these mercurial and purgative medicines were repeated three or four times a-week, for some weeks, and afterwards twice or thrice a-week for some time longer.—But it has been found, that this method of cure has not only often hurt the constitution, by weakening the patient too much, but has commonly made the disorder run out to great length, and frequently left an incurable gleet behind; and therefore it has now been laid aside, and milder methods adopted in its place.

Some practitioners of late have been against the use of mercury in gonorrhœas, and trusted the cure principally to mild opening medicines, given every other day, and the use of soft diluting liquors, and a mild cooling regimen of diet; to which, after some time, they have joined the use of the gentle astringent and balsamic remedies; and they have affirmed that the cure has been performed more pleasantly to the patient, and with less
hurt

hurt to the constitution, than where mercury had been made use of.

Others, from a belief that purgatives have no effect in either correcting or discharging the venereal virus in a gonorrhœa, have given repeated small doses of some mild mercurial preparation, for some time, in order to remove the venereal taint; and during that course have given from time to time a dose of some mild opening medicine, to keep the body cool, and to prevent the mercury taking to the mouth; at the same time that they have, during this course, made their patients live on a cool regimen, and drink freely of mild, softening, diluting liquors; and afterwards have added the use of the strengthening and balsamic medicines.

From what I have observed in the numerous cases of gonorrhœas that I have seen, I think that where the disorder is very mild, it will often be cured without the use of mercury, by the method above mentioned; for the running, in such cases, will commonly carry off the venereal taint of itself, without any accident, if the body is kept cool; after which the running will gradually diminish in quantity, become thick and ropy, and at last stop entirely, if the constitution has
not

not been broken down by rough purgative and mercurial remedies.

But where the running seems to be of a virulent nature, and the pain and heat in making water, and the other inflammatory symptoms, have not abated much by the evacuations and the cooling remedies given in the beginning, or the seat of the disorder seems to be high up in the urethra, I think that mercurials ought to be given, to assist in correcting the venereal virus; for purgative medicines certainly have no effect, either in doing this, or in discharging the venereal matter out of the body; for in my opinion, all that mild purgatives do, is, to keep the body cool by emptying the bowels; and no practitioner, who understands his business, would, if it was in his power, ever attempt to discharge the virulent matter of a gonorrhœa by stool, when he considers that it first must be taken up into the blood before it can reach the bowels; and that in the attempt he may effectually pox his patient: and I am persuaded that several of those poxes which have come after gonorrhœas, have been occasioned by the use of strong drastic purges, which have occasioned an increased absorption of liquors from every cavity.

In

In the cure of virulent gonorrhœas, the method which I think best is this; after using the evacuations and cooling remedies in the beginning, the patient ought to continue to keep the parts extremely clean, by washing and bathing them frequently with some warm mild liquor; and to take for two or three days successively a dose of some mild mercurial medicine, such as a grain of calomel (*mercur. dulc. subl.*) or of the *mercurius calcinatus per se*, well rubbed, with a quarter of a grain of opium, and made up into a pill, with a little conserve of hips; or two or three grains of quicksilver, killed in balsam copaivi or honey, and made up into a pill, with some powder of liquorice; or to rub in a little of the *unguentum cœruleum* (*mercuriale*) on the thighs; and on the third or fourth day to take so much of some mild opening medicine, as will give two, or at most three loose stools in the day; and after a day or two to repeat the same medicines; and afterwards to repeat them so often as may be judged necessary; care being taken never to give such a quantity of mercury, or to repeat the mercurials so often as to affect the mouth.

—And during this course the patient ought to live on the diet, and use the mild cooling

liquors above recommended. And after some time the mild, astringent, and strengthening medicines, and the use of natural balsams, rubbed with sugar, or beat down with the yolk of an egg, and mixed with some of the common julep, will forward the cure much.

Such are the methods now used for the cure of gonorrhœas by internal medicines, of which it ought to be observed, that it has frequently happened that the running has continued for some months, though the most approved method has been followed, and the patient has conformed in the most strict manner to the rules laid down ; and the person who treated the disorder has been blamed for want of skill : which has induced practitioners to use injections of different kinds, as they found, that by their means they could in general stop the running, and seemingly make a cure in a much shorter time than by the use of internal medicines alone.

Of the use of injections and bougies in gonorrhœas.

As there are no remedies which have been more generally or more indiscriminately, and often more injudiciously used than injections,

I shall

I shall here just mention the principal substances of which they have been composed, and the effects they commonly produce, and then add a few remarks on their use in the cure of gonorrhœas.

Great variety of these injections have been used, but they may be all divided into four classes. — 1. The mucilaginous and oily. — 2. The digestive. — 3. The mercurial. — 4. And the astringent.

1. Milk and water, emollient and mucilaginous decoctions, and sweet oil, have all been used when made warm, in the inflamed state of the disorder, in order to soften and lubricate the inside of the urethra, and defend it against the acrimony of the urine; but certainly these injections can do no more than give a little present ease.

2. The digestive injections have been commonly prepared either by dissolving a drachm or two drachms of the balsamum copaivi, or balsam Canadense, or of some other of the natural balsams, in the yolk of an egg; and then adding half an ounce of mel rosarum, and two ounces of oil, and four or five ounces of water; to which has occasionally been added twenty or thirty grains of the mercurius præcipitatus albus dulcis, or of calomel;

—or by dissolving some of the mercurial ointment, prepared with the addition of a little turpentine, in the yolk of an egg, and mixing it with watery, mucilaginous, or oily liquors. These digestive injections without mercury, commonly on using cause a great discharge of a thin watery liquor from the urethra, and afterwards make the matter of the gonorrhœa thick and ropy; and they often speedily remove the pain and heat in making water, and in a few days stop the running; but if they be discontinued for a day or two the running returns as before. With the addition of the mercurius præcipitatus dulcis, or of calomel, they acquire a certain degree of astringency.—If it is meant to effectually stop the running, then, after the pain and heat in making water is removed, and the discharge becomes thick and ropy, and in small quantity by the use of the digestive injections, a weak solution of white vitriol, or some other of the astringent injections, must be used for a week or longer.

3. From a supposition that mercury, applied to the part, has an effect in correcting the venereal virus, it has been used in various forms in injections. The mercurius præcipitatus albus dulcis, and calomel, (or the merc. sublim.

sublim. dulc.) have been used with digestives and oil, as just now mentioned; and they have been suspended in mucilage of gum arabic; and twenty or thirty drops of Van Sweiten's solution of the corrosive sublimate have been mixed with five or six ounces of water, and used for the same purpose. All the mercurial injections have a greater or less degree of astringency, from the mercury in them having been corroded by the marine acid: and they assist in drying up the running; but I doubt much whether the local application of mercury in any form has any effect in correcting or destroying the venereal virus; for from what I have observed, I am convinced that it is the effects of mercury circulating with the blood, that either destroys or evacuates the venereal virus, and not its simple application to any part.

4. The astringent medicines which have been used in injections are many; verdigris, blue and white vitriol, ceruss, saccharum saturni, alum, lapis calaminaris, different sorts of boles, and a number of other things, vegetable as well as mineral, which have been dissolved or suspended in various forms in watery or in oily li-

quors * ; and all of them seem to act nearly in the same way, by constringing the mouths of the vessels, and stopping the running.

Such are the most common sorts of injections which have been prepared ; about the use of which in gonorrhœas practitioners have been much divided in their opinions ; some condemning all of them, as the most destructive remedies ever invented, and productive of the most direful woes to many unwary youth, by throwing the venereal virus into the blood.—While others give them the greatest praises, and boast of the many cures they have made with them, without any mischief following — And others, though they disapprove of their indiscriminate use, yet approve of them under particular circumstances ; and think that there are none of them but what will prove prejudicial, if employed at improper times ; but that most of them may be used with safety as well as

* The verdigris is commonly dissolved in the spiritus salis ammoniaci dulcis, in the proportion of a drachm of the verdigris to an ounce of the spirits ; and some drops of this tincture is added to a few ounces of oil or of gum arabic mucilage. —The saccharum saturni, white vitriol, and alum, are dissolved in water —The cerufs, lapis calaminaris, bole, the trochis albi rhafis powdered, &c, are suspended in a gummous mucilage.

success,

success, when the virulence of the discharge is gone, and it is in a state to be stopped.

The observations I have made on the use of injections are these :

That they generally stop the discharge in a short time, and the earlier they are used, after the first appearance of the running, their effect in stopping it is the more certain.

That the injections of the digestive kind commonly make a seeming cure, or at least alleviate the symptoms, and render the discharge thick and ropy in a short time ; but soon after leaving them off, the running returns as before, unless some astringent injection be used after them.

That although I have seen many complete cures made by injections, yet that I have frequently observed mischief follow their drying up the running ; swelled testicles and buboes have followed soon after ; and I have seen several instances where nocturnal pains, ulcers in the throat, nodes on the shin bones, and even a corona Veneris have appeared in some months after, where the patients have declared that they had not the least reason to suspect their having received any fresh infection.

From all which I must conclude, that they are always hazardous while there is the least suspicion of any venereal taint still remaining. However, as in a military life, there may be circumstances of officers and soldiers going upon service where they have not an opportunity of taking care of themselves, and would run any risque to be free of the running, I shall here mention some few directions relative to the best method of using them.

1. That whatever injection is used it ought not to be made stronger, or more irritating, than just to raise a gentle heat in the urethra, but never to create sharp pain or difficulty in making water ; for I have sometimes seen a very troublesome dysuria, and threatening inflammation which lasted for some hours, by too sharp injections being used ; besides, these sharp injections rather prolong than shorten the disorder.

2. That before using any injection, the patient ought to make water to clean the parts, and to prevent any of the virulent matter from being carried by the injection higher up the urethra than the seat of the disorder ; and when once the liquor is thrown up the urethra, it ought to be confined and kept there,

there (when the syringe is drawn back) for some minutes, by means of gentle pressure on the urethra, made with a finger and thumb; and the patient ought not to make water for some time after using the injection, that it may not be too soon washed away.

3. That when injections are used it is always adviseable to make the patient undergo an alterative mercurial course for some time, in order to prevent as much as in our power the effects of any of the venereal matter that may be taken up into the blood; for even after every precaution has been used that prudence could suggest, sometimes untoward accidents have followed the use of injections.

Instead of injections, some practitioners have made use of bougies, and have asserted that they have made many cures of gonorrhœas by their means. The effect of them seems to depend on their pressure gently irritating the urethra, and causing at first an increased discharge, particularly from the diseased part; and afterwards making the vessels contract and dry up the running; they may in some measure be considered to act in the same way as injections, and the same precautions ought to be taken to prevent the bad effects of stopping the running suddenly.

The

The bougies used ought to be of the mild kind, made of a good form and consistence, and free from sharp and irritating ingredients.

S E C T. III.

Of gleans.

IF the running in a gonorrhœa changes its colour from a greenish yellow, to a clear rosy, or limpid watery colour, and this discharge continues long, it is called a gleet—and where the running continues for months, even without any change of colour, it is often, though improperly, called a gleet likewise.

In the first case, if there be no other venereal symptom, it is probable that the virulency of the original disorder is gone; in the latter it is always doubtful, as we have no certain criterion to judge when this happens; for although the virulency is often gone after the disorder has continued for months, yet this is not always the case, for it is sometimes kept up by the virulency of the disease for a long time. Sometimes such gleans depend on strictures in the urethra.

In

In the first case, where the discharge is limpid and ropy, the cure requires the use of the bark, and natural balsams; of chalybeate mineral waters, and other strengthening remedies—of a more liberal diet, and the moderate use of red wine—and sometimes exercise, particularly on horseback, and cold or sea-bathing—and sometimes the use of bougies, or of the gentle astringent injections continued for a considerable time.—And Dr. Mead has recommended a tincture of cantharides, with rhubarb, g. guaiac. and g. lac, taken from 30 to 50 drops, morning and evening, in a draught of warm water, as one of the most efficacious remedies he ever tried.

In the second case, where the discharge continues of a greenish yellow colour, and we have reason to suspect that it is kept up by the virulency of the disorder, it is sometimes necessary to give mercurials freely till the taint be entirely gone, and then to treat it in the same manner as where the discharge is limpid.

S E C T.

S E C T. IV.

Strictures of the urethra.

SOMETIMES stoppages or strictures of the urethra come on after gonorrhœas.—If there be any suspicion of a venereal taint that must be removed by the general remedies to be mentioned presently when we treat of the confirmed lues venerea; but the cure of this particular symptom requires the use of cooling opening medicines, and of soft mucilaginous liquors and bougies * introduced into the urethra, and kept a longer or shorter time according to the effects they produce, and as the patient can bear them without pain; and

* With respect to the use of bougies, it is now generally agreed that they act more by gradually distending, and bringing a gentle discharge from the part, than by any specific virtue in the ingredients of which they are made. And as the acrid substances which have sometimes been used in their composition either as specifics, or with an intention of promoting a large discharge from the part, have been found to bring on inflammation, strangury, and other troublesome symptoms, they are now generally laid aside, and mild ingredients used; and what practitioners aim at is to have very smooth mild bougies, of a sufficient degree of firmness, suppleness, and tenacity, to be introduced into the urethra, to conform to the motions of the body, and to lie easy in the passage.

For rules for making such bougies, see the late Mr. Sharp's Critical Enquiry, chap. iv.

where

where the strictures are great, and there is much rigidity, it sometimes requires likewise bleeding, warm baths and fomentations, and in some particular cases the introduction of steams of warm liquors into the urethra, by means of hollow bougies or catheters.

S E C T. V.

Hard knots in the urethra.

HARD knots which form sometimes in the corpus cavernosum urethræ after venereal complaints, are often very troublesome and difficult to cure.

Alterative mercurial medicines, and the decoctions ought to be given to remove them; and sometimes after mercury has been used freely without any effect, they have been resolved by the douches of the Barege waters*; whether the douches of other warm waters might not have the same effect I cannot say. The Barege waters are recommended for this purpose in the Memoirs of the French Academy of Surgeons, and I have known myself one instance where they were tried with success.

* See a particular account of the Barege waters in my Treatise on Mineral Waters, vol. ii. p. 107.

S E C T. VI.

Swelling of the testicles.

Swellings of the testicles, commonly called *herniæ humorales*, often follow the diminution, or entire suppression of a gonorrhœa and their cure requires — repeated bleeding in the beginning — antiphlogistic purges — nitrous, and other cooling medicines — the suspension of the diseased part in a truss — the application of emollient and discutient poultices — mercurial frictions on the part — and when the swelling begins to go away, a gentle mercurial alterative course to carry off the venereal taint.

Sometimes these swellings go off easily with well timed evacuations in the beginning, and the application of the common emollient and discutient fomentations and cataplasms. — At other times I have seen the swelling and inflammation become very considerable, and require six or seven, or more repeated bleedings, and the continuation of the antiphlogistic remedies for some time before the violence of the inflammation was got the better of; and by way of external remedies I have
found

found none answer better than to rub the part with a mercurial ointment made with only hogs-lard and quicksilver, to which some camphor has been added, and to apply a bread and milk poultice in which some hemlock has been boiled ; and sometimes the fomenting the parts with emollient and discutient liquors ; and afterwards rubbing and bathing them with spiritus Mindereri, or putting cloths wetted with it to the parts is of service.—And Goulard's saturnine poultices proves a good application to others.

Sometimes after the violence of the pain is gone, the swelling continues long, and requires the use of emetics, and of brisk mercurial purges to discuss it.—In some cases, where the testicles continued swelled for many months, I have seen a strong decoction of sarsaparilla drank to a quart a day, remove the disorder after variety of mercurials, purgatives, and other medicines had been tried in vain.

When once such swellings begin to give way, they generally lessen very quickly, though a hardness on the epididymis often remains for months, or for years afterwards.

S E C T. VII.

Of the confirmed lues venerea, or pox.

WHEN the venereal virus is taken up by the absorbent vessels into the lymphatic glands, or into the blood, the disease is called a pox ; and it produces various mischiefs according to the parts on which it falls.

When it is lodged in the small sebaceous glands surrounding the neck of the nut, or in the cellular membranes of the glans penis, and is so acrid as to erode the neighbouring fibres and vessels, it then causes little spreading ulcers called chancres.—If it be thrown into the glands of the groin, or of the armpits, it occasions tumors in these glands called buboes.—And when the virus is taken up into, and circulates with the blood, it produces various symptoms according to the parts it falls upon, such as—ulcers in the private parts and throat—pains in the bones, which are most severe when warm in bed, or after being heated with exercise, or spirituous liquors.—Eruptions and blotches over the skin, particularly on the forehead, the nape of the neck,

neck, and breast—a leprous like scurf on many parts of the body—excrescences called *nodi*, *tophi*, *gummi* on the surface of the bones, which appear most frequently on the skull and shin-bone—*caries* of the skull, and of the small bones of the nose and palate,—swellings and exulcerations of the spongy ends of long bones.—Excrescences from the parts about the anus, called *mori*, or *fici*, according to their different appearances.—In short, when this disorder has been allowed to go on, it has rendered almost every bone in the body carious, and occasioned ulcers in every part.

This poison is observed to attack the lymphatic glands, the cellular membranes, and soft spongy parts of bones more particularly than other parts; which is owing to the tainted fluids, when once they are thrown out of the circulation into the cells of these parts, remaining there and eroding and irritating the parts about, so as to inflame them, and prevent their own reabsorption into the circulation; and hence follows swellings and supurations in those parts in which the vitiated fluids are confined.

Having given a general history of the disease, I shall next point out the proper me-

thods for removing the general taint from the blood, and then mention the different treatment that the particular symptoms require.

The Arabians had introduced the use of mercurial unctions in the cure of leprous and other cutaneous disorders ; and as soon as the venereal disease made its appearance, physicians, from the similarity of these maladies, began to use them for the cure of the lues venerea likewise ; but as they were not well acquainted with the proper methods of using these unctions, they generally threw their patients into very high salivations, and many of them died ; so that in a little time most practitioners became afraid of using mercury, and attempted the cure, by bleeding, purging, and sweating, and the use of decoctions of the woods ; though Joannes de Vigo, of Genoa, a famous physician of these times, wrote a treatise in the year 1503, in which he assures us, that mercurial ointment rubbed twice a day on the legs and arms, till the gums began to swell, and the teeth to turn loosish, was the best and most efficacious remedy for the cure of this disorder ; and after the researches of so many years since the first appearance of this disorder, no remedy, except mercury,

cury*, has as yet been known effectually to destroy the venereal taint when it has once got into

• It would be a very happy circumstance if any mild vegetable substance could be discovered capable of curing this disorder, as the effects of mercury are often prejudicial to the constitution. Variety have been recommended and tried for this purpose.—Decoctions of guaiac wood, of sarsaparilla, &c. with the assistance of baths, were, at one time, said to have been certain remedies for curing the venereal disorder; but after a hundred years experience, they have been found ineffectual without the assistance of mercury.

Two or three other vegetable substances are still recommended for this purpose; but I do not know that any proper trial has been made of any of them in Europe to ascertain their virtues.

The sumack root was administered by a negro slave in Virginia, called Dr. Papaw, in powder; and it is said to have cured many people both of the yaws and the venereal disorder in the year 1730. The negro at first kept his remedy a secret, but the assembly of the province being fully ascertained of the cures, paid Mrs. Littlepage, his mistress, sixty pounds for his freedom, and gave him an annuity for life for discovering the medicine, which was sumack root finely powdered, and mixed with the fat and dung of deer to disguise it; and an account of the medicine was published in the Virginia Gazette, by authority of the assembly.

The virtues of a species of the lobelia, growing in Virginia, in the cure of the lues venerea, was first discovered to the late sir William Johnson, in America, by the wild Indians; and he communicated his intelligence to M. Kalm, who sent an account of this plant to Linnæus, which was inserted in the Swedish Transactions, and since in the 4th quarto volume of Linnæus's *Amœnitates Academicæ*.

A strong decoction is to be made with four, five, or six, or more roots of this plant, and the decoction is to be drank in large quantity every morning for a fortnight, or three weeks, or

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longer;

into the blood ; the decoctions of the woods, and of sarsaparilla, and other substances, being found inadequate to the purpose without the assistance of mercury.

Where there are evident symptoms of a confirmed pox, the only method of cure that has hitherto been found effectual, is to throw in such a quantity of mercury, either by the mouth, or by unction, as will bring on more or less of a salivation, and to keep that up till most of the venereal symptoms disappear.

The best method of raising a salivation, I think is this.—Before any mercury is given, if the patient is plethoric, a little blood ought to be taken away, to prevent any bad effects from the circulation being quickened by the mercury—and a dose or two of some

longer ; if the decoction be too strong and purges, it must be made weaker, or lowered with water ; and the patient must wash himself with the decoction as well as drink it, and must live on a spare vegetable diet during its use.

The species of lobelia here recommended grows in Virginia, and is called by Morison, Hist. 2. p. 466, *Rapunculus galeatus Virginianus flore violaceo majore* ; and it is thus described by Linnæus in his Hort. Cliffor. 426. *Lobelia caule erecto, foliis ovato-lanceolatis, crenatis, calycum sinibus reflexis.*

The roots of the *ceanothus Americanus*, are said to be possessed of the same virtues, and to be used in the same manner ; vid. Linnæi *Amanitat. Academ.* vol. iv. p. 530.

gentle

gentle phyfic ought to be taken to clean the bowels ; and if the patient's circumstances will allow of it, he ought to go three, four, or more times into the warm bath, in order to clean the skin and render it more perspirable.

After this, if the salivation is to be raised by internal medicines, the patient ought to take two, three, or four grains of calomel (mercur. dulc. alb. sublim.) rubbed with a quarter of a grain of opium, and a little conserv. of roses ; or six or seven grains of quicksilver, killed with honey, or balsam copaivi, and made up into a bolus or pills, with powder of liquorice, or conserve, twice a day.—Or if the salivation is to be raised by unction, to rub well into the thighs or legs, near a fire, a drachm of mercurial ointment, morning and evening—and one or other of these courses is to be continued till the breath begins to smell, and a bad taste to be perceived in the mouth, and the gums to swell and become painful ; after which the mercury is to be used more sparingly, and only rubbed in such quantity as to keep up a spitting of a pint, or two pints, in the twenty-four hours, for three or four weeks or more till the symptoms have entirely disappeared,

R 3

and

and after that to continue it a week or ten days longer, if the disorder has been very inveterate, in order to eradicate it totally, and to prevent any danger of a relapse.

During this mercurial course, the diet ought to be of the lightest kind, composed mostly of thin broths and bread, panada, sago, gruels, bread or rice-pudding, and such like; and the patient ought to drink freely of barley, or rice-water, cow-milk whey, orgeate and water, thin water-gruel, &c. and to wash and gargle the mouth frequently with some warm mild liquor.

When once the salivation begins to decline, the patient ought to drink daily a quart of the decoction of the sarsaparilla, or of the woods, and to continue this course for some little time after the salivation is over, and then to take a few doses of some gentle purgative medicine to carry off the remains of the mercury.—If after the salivation there should be any suspicion of any of the venereal symptoms still remaining, some mild mercurial preparation, given by way of an alterative, joined to the use of the decoctions*, and
 conti-

* *Of the Lisbon diet drink.*

The physicians at Lisbon were generally believed to prepare a decoction more efficacious in removing those venereal complaints

continued for some time, carries off for the most part any remaining taint.

If during the mercurial course there should be any danger of the salivation rising too high, the farther use of mercury ought to be laid aside till that is over, and the body kept open, and a free perspiration be kept up by means of warm diluting liquors and diaphoretic medicines.—Or if a purging be threatened, the use of mercury ought to be omitted for some time, and the purging be endeavoured to be checked by mild opiate and astringent medicines, and the use of anodyne clysters.

As a salivation is both very loathsome and disagreeable to patients, physicians have attempted to cure this disease by giving mercury in such a manner as not to affect the mouth; and where the taint is slight, or where the

plaints, which sometimes remain after a salivation, than any that was known in this country; the following is the receipt of this decoction, which we have reason to believe is a genuine one, as it agrees in the principal ingredients with two other receipts which came through different channels.

R Rad. sarsaparil. santal. alb. at rub. singulorum unc. iij.
Glyceriz & Mezereri singul. unc. dimid. Ligni Rhodii
guaiaci et sassafras. singul. unc. i. antimon. crudi, unc. ij.
Misce & infunde in aquæ puræ bullientis lib. x. per horas
24. & dein coque ad lib. v. colaturæ capiat æger a lib. i.
℞. ad lib. iv. quotidie.

R 4

patient

patient has time to spare to continue an alterative course (as it is called) long enough, it will often carry off venereal complaints which would have seemed to have required a salivation; though I do not think any of these courses are so certain, or so much to be depended upon, as the salivation.

The alterative methods commonly used are,

1. To soften and relax the skin by repeated tepid baths, so as to render it extremely perspirable, and afterwards to rub in freely of mercurial ointment till the disorder is cured, stopping the frictions for some time if ever the mouth be in the least affected. At Montpellier, the physicians make their patients go into a tepid bath for an hour at a time, and repeat these baths from thirty to eighty times * before they begin to use mercury;

** Of the Montpellier method by baths and unctions.*

A physician who had been often at Montpellier, and once underwent a course of mercury himself at that place, and afterwards went round with several of the physicians to visit their patients, told me, that the method practised there, which they keep as a great secret, is as follows. They make their patients go into a warm bath, and continue in it for an hour, once or twice a day, or if very weak, only once every other day, till they have had from thirty to eighty baths, generally about fifty before any mercury is used. The baths are made no hotter than what is agreeable, and they may rather be called

cury; after which they rub in large quantities of mercurial ointment without affecting the

ed tepid, than hot baths, and they do not weaken as baths commonly do, when made warmer. During this course of bathing the patients walk about, but live on a spare diet and drink little wine.

After the bathings are over, the patients begin to rub in daily a very well prepared mercurial ointment, in double the quantity that is commonly ordered at other places for raising a salivation; and they continue these frictions for five, six, or more weeks as necessary; during this course, the patient is desired to keep the house, unless pressing business require his going abroad, when it is permitted for a little every day at proper hours, but this is always thought to be attended with some risque. During the use of mercury, the patient is confined to live on a diet of ptisans, weak broth, eggs, and milk.

The doctor assured me, that the mercury, when used after these bathings, never takes to the mouth, but passes always off by insensible perspiration, even though double or triple the quantity of mercury is rubbed in, that would salivate a person who had not used the baths. He told me, that the taking a few grains of mercury, or even the rubbing a very small quantity of mercurial ointment on the skin used immediately to affect his own mouth and bring on a spitting; but that after having gone into the baths, as above mentioned, he had rubbed in an almost incredible quantity of strong mercurial ointment without affecting his mouth in the least.

During the mercurial course, the physicians do not allow their patients to change either their body linen, nor their sheets in bed.

The physicians at Montpelier reckon it a matter of great moment to have the mercury extremely well killed, and therefore even after the quicksilver seems to be intimately mixed with the hog's lard, they make it constantly be rubbed for twenty-four or more hours; and the physicians told the doctor that experience had taught them, that an ointment thus prepared

the mouth, and cure many cases of poxes by these means. During the mercurial course, the patients live on a diet similar to the salivating diet above recommended; and in warm weather sometimes they permit their patients to go abroad a little in the day if they have urgent business; but in this climate it is certainly much more safe for the patient to keep the house, when the blood is loaded with mercury.

I do not know that ever the frequent bathings have been practised here as at Montpellier; but the common alterative methods, as they are called, have been; after preparing the body in the same manner as if a salivation was to be raised, to make the patients rub in a drachm or more of mercurial ointment every day for two or three days successively, and then to omit the frictions for a day or two, to prevent the mercury from taking to the mouth; and to continue thus rubbing, with alternate intermissions of some days, till the venereal symptoms are all gone, and then to continue it for some little time longer—or to make the patient take

pared was much more efficacious than the common mercurial ointment; and that the quicksilver with which it was made, was always well purified by distillation before it was used.

repeated

repeated small doses of some of the mercurial preparations, using the proper precautions to prevent their affecting the mouth; and to persist in the use of these medicines till the venereal symptoms all disappear, and for some time after.

After the mercurial course has been continued for a fortnight, or three or four weeks, the patients commonly are ordered to drink from a pint to two quarts daily, either of a strong decoction of the sarsaparilla, or of the woods, or of the Lisbon diet-drink; and to continue so to do till the cure is completed.

The mercurials administered in these alterative courses, have been all those used to raise a salivation, only given in smaller and in less frequent repeated doses; and several others, such as Keiser's pills*, Plummer's pills,

** Of Keiser's Pills.*

Keiser's pills were first used in France, and by order of the late king, were given in most venereal cases in the French military hospitals. Their receipt was at first kept a secret, but has since been published by authority, by Mons. Richard de Hautefierk, first physician to the French armies, at the end of the second volume of his *Recueil d'Observations de Médecine des Hospitaux militaire, &c.* a Paris, 1772;—by which it should appear, that they are only a solution of the mercurius præcipitatus per se, in distilled vinegar, and made up into pills with

pills, &c. †, besides the solution of corrosive sublimate in spirits, so strongly recommended by the baron Van Sweiten.

with manna : and the French military surgeons, who had given them as directed to many patients, were of opinion that they were not more efficacious than other mild mercurial preparations in common use, for the cure of the venereal disorder.

The mercury used for making these pills, is purified by first reducing it to a black æthiops, by shaking it for a long time with water, in a proper machine for the purpose, that is turned by a mill; — and then this æthiops is dried, and reduced back to quicksilver by distillation; and then a great quantity of combustible oily matter is said to be separated from it, by mixing it with quick-lime, which absorbs the oil, and leaves the mercury pure; and then all the lime is separated, by washing the mercury well in water, and then drying it in a balneum Mariæ.

The mercury thus purified, is calcined in the common way, and reduced to a mercurius calcinatus per se, which is dissolved in distilled vinegar, by being put in the proportion of one pound of mercury to eight of the vinegar, in a proper vessel or barrel, with a leathering stick (mouffoir) which is played for two hours or more, till they are intimately mixed.—Then three bottles of the vinegar, containing two ounces of the mercury, are mixed with two pounds of manna, and made up with flour into pills made the size of sugar-plums, which are kept for use.

† The mercurial salts now in use are mostly those where the mercury is dissolved in the marine acid; though the turpith mineral, which is a solution of mercury in the vitriolic acid, is sometimes used as an emetic; and when combined with calomel and camphor, has been often used as an alterative, and as such has been much recommended by the late Sir Edward Barry.

The mercurial salts, prepared with spirit of nitre, or solutions of mercury in this acid, have been found to be extremely hurtful to the constitution, and therefore are no more used by cautious practitioners.

This

This last-named medicine, the solution of the corrosive sublimate in spirits, in the proportion of one grain of the sublimate to two ounces of brandy, is said to have cured many hundreds of patients in the worst stages of the venereal disorder, by taking from half an ounce to an ounce of it morning and evening, and drinking after each dose a pint of barley-water, mixed with a third part of milk; while the patients lived upon broth, barley, rice, mild plain boiled or roasted meat; and abstained from wine, cyder, beer, acids, and fat and salted meats.—But with respect to the corrosive sublimate, I must observe, that although I think it a very useful medicine in many cases, I do not think that it can be depended upon for the cure of a confirmed lues venerea; for I have often seen it fail, and in other cases I have seen it carry off the symptoms, and seemingly make a complete cure; yet in some months after the disorder has returned, without any suspicion of a fresh infection; and therefore I have concluded, that either it is not sufficiently efficacious for eradicating a confirmed lues venerea, or that the use of it must be continued for a long time after the symptoms have disappeared, which is what few patients will conform to: besides,

fides, I have been of late informed, that its long continued use has proved very prejudicial to the health of many persons who have taken it.

In slight cases I have found it a very useful remedy ; and given in small doses, with decoctions of sarsaparilla, after a salivation, I have known it to carry off eruptions, and other slight symptoms, which have not yielded to the other mercurial remedies which had been before given.—As the solution is apt to run off by the bowels, it is often necessary to add a few drops of laudanum to it, or to make the patient take some of the mixtura Fracastorii during its use. And I think that the solution made with water, with the addition of a little spirit of lavender, is a preferable medicine to that made of the pure spirits.

Of particular symptoms.

Having taken notice of the principal methods for removing the taint from the blood, we shall next enquire into any particularities that belong to some of the particular symptoms.

SECT.

S E C T. VIII.

Buboes.

BUBOES, or swellings of the glands of the groin, as I before observed, are either produced by the virus venereum being carried directly to those glands by the lymphatics of the genitals, or by the blood being tainted, and part of the venereal virus thrown upon them. — In the first case, they may be the only symptoms of the venereal disorder, in the second they are always attended with others.

They are removed in two ways, either by discussing them, or by bringing them to supuration; and it has been much disputed among practitioners which of these two methods ought to be pursued. In my opinion, wherever there is no other symptoms of a pox, it is always best to bring them to supuration; because if we discuss them, we make the venereal virus pass through the tumified gland into the blood, and therefore may be in danger of poxing the patient; and though it must be owned, that they often discuss without any such accident, yet we have many examples of a confirmed pox following
their

their discuffion. But where there are evident fymptoms of a confirmed pox, that requires a mercurial courfe, if the buboes fhould, in the courfe of the general cure, begin to go away, I think we may then with fafety promote their diffuffion.

Buboes are diffuffed—by a low diet—by bleeding—by purging—by the application of difcutient fomentations and cataplafms—by rubbing the thighs and inguinal glands with mercurial ointment—and by an alterative mercurial courfe, which always ought to be purfued, even where the other fymptoms have not required it.

They are brought to fuppuration—by allowing the patient a free diet—by the application of emollient and ftimulating poultices and plafters.

When once they are fully fuppurated, the cure is to be completed by opening the abfcels, either with a knife or with cauftic; and afterwards treating it as a common ulcer; only when the fore begins to heal, the patient ought to undergo a mercurial alterative courfe, drinking, with the mercury, the decoction of farfaparilla, or fome other of the antivenereal decoctions.

Some-

Sometimes buboes put on the appearance of foul sores, and discharge a very thin ichorous matter, and are extremely difficult to heal. Where this proceeds from the virulence of the disorder, mercury and the anti-venereal decoctions are the proper remedies; but where the thinness of the juices comes from a long continued use of mercury, it is often necessary to make the patient lay aside the use of all mercurials, and live on milk and other easy digested food, and take the bark freely, while he drinks a quart of the decoction of the sarsaparilla daily.

Sometimes buboes remain long hard, and will neither discuss nor come to suppuration; in which case, after all means have been tried to make them do one or the other in vain, they ought to be extirpated, if they are so situated that it can be done without danger.

S E C T. IX.

Chancres.

CHANCRES, or little venereal ulcers on the private parts, are either the only symptoms, or are the attendants of other ve-

venereal complaints. — When they are single, they are sometimes cured by gentle purgative and mercurial alterative medicines, such as the solution of the corrosive sublimate, or by gentle mercurial frictions, and the use of the decoction of the sarsaparilla. — However, it ought to be observed, that chancres are the most deceitful symptoms we meet with in this disorder; and that in most cases the patient ought either to undergo a gentle salivation, or an alterative course, continued for some time after the chancres have disappeared; for where these precautions are not used, frequently after some time the venereal disorder breaks out afresh, in form of buboes, chancres, ulcers of the throat, and pains in the bones; and the worst venereal cases I have ever seen followed the bad treatment of chancres.

While patients are under the mercurial course, the chancres are to be kept clean, and proper dressings applied. If the lips of chancres prove callous, Dr. Turner has recommended the use of mercurial fumigations to discuss and heal them, and likewise for the cure of other venereal sores: and surgeons have applied various discutient, mercurial, astringent, digestive, and gentle escharotic

rotic ointments, to remove their callous edges ; and at last have often been obliged to touch them with the lunar caustic, or to cut them away with the knife.

Chancres sometimes go away very easily, and at other times continue to increase till the general method of cure is pursued, and the mercury begins to be felt in the mouth. — Sometimes, where the venereal taint is very virulent, they make an extremely rapid progress, and are in danger of eating away the glans penis, or other parts they are contiguous to, in a very short time, if timely assistance is not given. — I have seen chancres which have made deep sores in the neck of the nut, and a hole in the prepuce that would admit a finger, in a few days after their first appearance ; and I have seen the whole nut eat away in a fortnight's time.

Such cases require to be attended to immediately ; they are generally accompanied with a good deal of swelling and inflammation of the parts ; and the cure requires free and repeated bleeding, according to the violence of the symptoms — the emptying the bowels by a dose or two of salts, or other cooling physic—the drinking freely of barley-water, or other cooling diluting li-

quors, with nitre ; and in short, to follow out the antiphlogistic method of cure ; at the same time, that immediately after the bleeding the patient rubs in a drachm or more of the mercurial ointment morning and evening, so as to throw the mercury into the blood as soon as possible ; for I have observed, that we often cannot check the progress of the disorder till the mercury begins to affect the mouth ; after this happens, we are to proceed as directed in the general cure.

S E C T. X.

Of venereal ulcers in the throat and in other parts, and of the venereal cancer.

VENEREAL ulcers in the throat require the general method of cure ; and to be frequently washed with some detergent gargle, and fumigated with cinnabar in the method recommended in the Edinburgh Medical Essays ; and when such ulcers appear foul, sometimes touching them with some gentle escharotic, has been of service.

Ulcers in the other parts require the same treatment as chancres : and I shall only farther

ther observe of chancres, and other venereal sores, that sometimes through the virulency of the disorder, and too rough treatment, they have degenerated into a kind of cancerous sore, not to be cured by any remedies; of which I have given a melancholy instance, in the second volume of the Medical Transactions published by the college of physicians in London.

S E C T. XI.

Of venereal ulcers with carious bones.

VENEREAL ulcers with carious bones, especially of the nose and palate, ought to be kept clean by frequent mild ablutions; and in pursuing the general cure, we ought to be cautious in the use of mercury, in not giving it in too large quantity; otherwise we may quicken the circulation too much, and bring on a high salivation, that may be in danger of making the caries spread. A slow course, with the sarsaparilla or Lisbon decoctions, is preferable, and generally succeeds better than a high salivation in such cases; and frequently it is necessary to continue a

mild alterative course, with the decoctions, for a long time after the spitting is over, before a cure is completed.

S E C T. XII.

Of nocturnal pains and venereal blotches.

NOCTURNAL pains and venereal blotches are only to be removed by a salivation; and if they do not yield to that, an alterative course, with the decoctions and warm baths, may be tried.

S E C T. XIII.

Of venereal excrescences called fici, mori, &c.

THESE excrescences sometimes remain after a salivation; and it is necessary to make the patient continue an alterative course for some time after it, while mercurial and other discutient applications are made to the tumours, or some gentle astringent or escharotic powder, such as the powder of lapis calaminaris, or of the sabin, &c. are sprinkled over them; and if these mild methods

thods have not the desired effect, it is sometimes necessary either to eat them away with caustic, or to extirpate them with the knife.

S E C T. XIV.

Of venereal nodes, topbi, gummi, &c.

THESE excrescences on the surface, or tumefactions of the substance of the bone, commonly yield to the general cure, and rubbing the parts with mercurial ointment, and the application of other discutient remedies. The Lisbon diet-drink formerly mentioned, joined to the use of a mild alterative mercurial course, after a salivation, has been found to have a remarkable good effect in removing them, if they have not already made the bone below carious, or are come to suppuration. These venereal tumours have generally been observed to begin in the periosteum on the outside of bones that lie nearest to the surface of the body, which has been conjectured to be owing to the cold contracting those vessels more than those which lie deeper. Surgeons have advised, so soon as

such tumours are observed on the surface of bones, to make an incision into them, and to promote a suppuration from the part; because they think that by these means the venereal virus is evacuated, and a caries of the bone prevented, which often follows where this is neglected, even though the swelling be removed by a course of mercury.

The late Mr. Freke, in his Essay on Healing, published A. D. 1748, advises an incision to be made quite round such tumours, so as to go quite through the periosteum to the bone; and then if the bone is found to be carious, to raise the whole middle part by means of proper instruments.

C H A P. XXIV.

Of the itch.

THERE was no disorder so common in the military hospitals as the itch. It is of an infectious nature, and now most commonly believed to be entirely owing to little insects lodged in the skin, which many authors affirm they have seen in the pustules by
the

the help of a microscope; and that the disorder is entirely communicated by infection, and does not arise from any fault in the fluids or solids.

It has been long believed, that internal medicines have little or no effect in removing this disorder; and that only external remedies, which come immediately in contact with the parts affected, are capable of making a cure; which has been brought as a farther proof that the itch is owing to animalcules or insects; as it is alledged, that no remedies will cure the distemper, but such as are capable of killing them.

Although this is the general received opinion, yet Dr. Albert Hen. Aug^s. Helmich * says, that he has often cured the itch by the use of the following remedies. \mathcal{R} Aq. fœnicul. & aq. menth. āā, mensuras iv. (vel lib. xij.) flor. papav. rhœad. pug. i. ol. vitriol. drachm. ij. m. capiat cochlear. 1^m 4^r die; & dein omni trihorio, & tandem omni bihorio. —At the same time that he ordered the patient to take every other night a scruple, or

* See his Inaugural Differtation de Ufu interno Olei Vitroli diluti in nonnullis Scabiei speciebus, p. 21. Published Halæ Magdeburg, Sept. 23. Ann. 1762.

half a drachm of the following powder :
℞ Pulv. rhabarb, nitri āā, drach ij. conch.
pp^t antimon. diaphor. āā, drach i.—And gave
for common drink what he calls the species
mundificantes ;—and every 5th or 6th night
a gentle purge.

He says these medicines brought out at
first a large quantity of eruptions, but cured
the disorder in three or four weeks.

The medicines which are most commonly
used for the cure of the itch are, mercury,
white helebore, and sulphur.

Mercurial frictions on the part are often
made use of, and sometimes with success,
though they are by no means to be depended
upon for a cure ; besides, that they are
liable to throw the patients into a salivation,
as I have seen happen more than once ; for
which reasons I would never recommend
this method where the patient labours un-
der no other disorder which requires the use
of mercury, and would confine it entirely to
cases where patients, having the itch, la-
bour at the same time under the lues vene-
rea, and require the free use of mercurial
frictions ; under such circumstances, the
mercurial ointment may be as well rubbed
on

on the parts affected with the itch as upon any other.

The powder of the root of white helebore, made up into an ointment with hogs lard, or a strong decoction of it in water, rubbed on the parts, will often cure the itch; but it is a sharp medicine, and generally smarts, and sometimes inflames the parts on which it is rubbed; and therefore it is not so commonly used, as we know a much surer and milder remedy; though I have cured some people with the helebore lotion, without any inconvenience, who would not use the sulphur, on account of its smell.

Sulphur is the most certain and easy cure for the itch of any we know, and perhaps is more certain in the cure of this disorder, than almost any other medicine in any other disorder whatever. We used it in form of the sulphur ointment of the London dispensatory, of which one, two, or more drachms, were rubbed in every night, in proportion to the extent of the parts affected. These unctions were continued from four or five to ten or twelve nights, according to the violence and continuance of the disorder.

Most

Most patients were cured in a few days ; others required a longer time.

In place of the sulphur ointment, some of the surgeons at Coxheath used sulphur in the following form, which they said answered every purpose of the ointment, and was much more cleanly for the men, in not dirtying their cloaths, or giving them a strong fetid sulphureous smell.—They set two quarts of milk into a vessel, and let it stand till it turned sour and curdled ; then they separated the curd from the whey, and mixed it with a sufficient quantity of flowers of sulphur to make it the thickness of an electary, and made their men rub with it morning and evening.

As sulphur rubbed on the skin tends to obstruct the perspiration, we generally ordered a purge to be given before rubbing the sulphur ointment, and in full habits sometimes ordered a little blood to be taken away ; and put the patients all under a low diet. After the disorder seemed to be removed, they took another dose or two of physic, to carry off any impurities that might have been thrown upon the bowels, during the use of the sulphur ointment. In inveterate cases, the sulphur

phur was given internally at the same time that the patient rubbed with the ointment*.

After the cure of the itch, it was necessary to have the linen and cloaths of the patients well cleaned and purified before using, in order to prevent a fresh infection.

It is generally believed (though denied by some) that sulphur, taken internally, enters the blood; and its steams are thrown off by the perspiratory vessels, and assists more effectually to destroy the insects and their ovula, which give rise to the itch; but whether this effect be true or not, I found it to answer another very good purpose; which was to keep the belly rather loose, while the patient used the unction; and in this way it carried off those humours which ought to have passed off by the skin; and for that reason, when it had not that effect, we joined some lenitive electary to it.

* Some people have recommended wash-balls made of four parts of flowers of sulphur, and one of powdered ginger, and a sufficient quantity of the coarse soft black soap, to make them into balls, as an efficacious and cleanly method of using sulphur. These balls are to be used with water for washing the affected parts two or three times a day, in the same manner as the common wash-balls are used for washing the hands.

There

There is one thing to be observed with regard to sulphureous unctions, which is, that we ought not to use them too soon with people recovering out of fevers, or other disorders which bring them low; otherwise there will be danger of bringing on a relapse, which I have often observed to happen in military hospitals, where the itch has appeared as the patients were recovering from fevers and other disorders, and the unctions were used too soon: but whether these relapses were owing to the sulphureous unction's stopping up the pores of the skin, and obstructing a free perspiration, or to patients being more apt to take cold while they used the sulphur ointment, than at any other time, is what I cannot determine; but to me it seems most probable, that these unctions rather obstruct the perspiration; and that when they are used too soon with people recovering from fevers, especially those of the putrid kind, they prevent those particles from passing off by the skin, which it was necessary should be evacuated, in order to free the body from the seeds of the fever, or other disorders the patients laboured under. But however this be, experience has
shewn,

shewn, that we ought not to attempt the cure of the itch, in patients so circumstanced, till their strength be in a great measure re-established, otherwise there will be danger of a relapse; and likewise, that patients using sulphur externally, ought to be particularly on their guard against catching cold.

This observation of peoples being so apt to relapse after fevers by the too early use of sulphureous unction, is a strong proof of the usefulness of keeping the body open during the time of rubbing, and of purging the patient afterwards; as by these means we may carry off by the bowels those particles which could not pass by the skin; and I think, so far as I have been able to observe, those people have been less subject to relapse into fevers where this caution has been used than where it has been neglected.

That species of the itch where it forms small ulcers or pustules in the skin, is the worst kind, and most contagious, and seems to take its rise from the common itch continuing long, and making its way deeper into the skin. The cure is the same, only this requires more frequent unctions, and those to be continued longer, than before the disorder has taken such deep root.

It

It was no uncommon thing to see the itch appear again, some weeks after it had seemingly been cured by the use of sulphureous unctions; which most commonly happened to those who were in too great a hurry to get well, and left off the use of the unctions too soon. Such returns of the itch were generally cured by the repetition of the same treatment as before.

A D D E N D A.

Of the confluent small-pox.

Omitted by mistake at the end of Sect. 2. of the chapter on Small-Pox, where it should have been inserted.

WHAT has been said of the distinct small-pox is equally applicable to the confluent; and therefore I shall only farther observe,

1. That the symptoms are nearly the same, but infinitely more violent in the confluent kind—that the pain of the head, back, and loins, are much more severe; and that the eruption appears much sooner, commonly on the 3d day, and sometimes sooner, and at first cannot often be distinguished from the measles.

That the pustules are small and flat, and run together, and sometimes cover the whole body.

2. That in a day or two after the eruption appears, sometimes sooner, a salivation comes on in adults (and a purging in young children); and that the saliva discharged at

first is thin and in large quantity ; but about the 7th or 8th day becomes more tough or viscid, and begins to lessen in quantity about the 8th or 9th ; at which time the hands and feet swell, if they were not swelled before.

3. That the matter does not dry and fall off in scabs, so soon as in the distinct ; and that the disorder will sometimes, where it ends favourably, run on till the 18th or 19th day, before we can declare the patient to be out of danger ; and will at other times be protracted till the 24th or 25th days, and the patient sink at last under it.

4. That it is common for the parts on which the weight of the body rests to mortify, unless great care be taken to prevent it ; and often abscesses form in different parts of the body at the end of this sort of small-pox.

That the treatment ought to be in many respects nearly the same as in the distinct kind.

1. That early in the disorder if the pustules appear to be of a bad sort, and do not rise and fill properly, the bark, where the breathing is not affected, has been found to be a good remedy, to support the vis vitæ ; and to assist in making the small-pox fill and mature kindly.

2. That

2. That when the salivation comes on, care ought to be taken to supply the patients plentifully with mild diluting liquors for drink ; and to make them wash their mouths and gargle frequently with mild acedcent liquors.

3. That if the spitting stops, and the hands and feet do not swell, that the bathing the feet, and the applying emollient poultices to the hands and feet, is often of service ; as is sometimes the application of blisters to these parts after the poultices are removed.

4. That if the pulse be low, and the patient in danger of sinking, that wine and cordials are required.

5. That if a diarrhœa comes on, at this period, which relieves the breathing, it ought not to be stopt ; as it sometimes carries off the variolous matter, and prevents its falling on the lungs ; and we know that a purging in children supplies the place of a salivation in adults.

6. That, at the turn, if the patient is attacked with a difficulty of breathing, oxymel of squills, and other pectoral medicines, ought to be given ; and sometimes the application of blisters is of use ; and at other times an emetic, to loosen and bring up the defluxion,

becomes necessary; and in some particular cases, where the difficulty of breathing is great, and the patient strong, bleeding is the only remedy capable of giving relief; and purging at this time has sometimes been of service.

7. That sometimes the surface of the pustules dries, and confines a large quantity of matter below, which keeps up a fever, and occasions troublesome symptoms; and that in such cases, the application of poultices to soften the crusts, and making incisions through them to let out the matter, becomes necessary.

8. That Mr. Holwell, in his Account of the Manner of inoculating the Small-pox in the East Indies, published in the year 1767, by Becket and De Hondt, booksellers, recommends the opening of the pustules, whilst the matter continues in a fluid state; and says, that so great dependence have the eastern practitioners on opening the pustules in the malignant sort, that where this has been neglected, they pronounce the issue fatal. In very critical cases, he says, they will not trust the operation of opening the pustules to the nurses and relations, but engage in it themselves with amazing patience and solicitude:

solicitude: and I have frequently known them thus employed for many hours together; and when it has been zealously persevered in, I hardly ever knew it fail of either entirely preventing the second fever, or mitigating it in such sort, as to render it of no consequence. In various instances which I have been a witness to, in my own and others practice, I have seen the pustules in the contiguous kind, upon being successfully opened, fill again to the fourth and fifth time, and in the confluent, to the sixth, and seventh, and eighth time. In the very distinct kind, they will not fill again more than once or twice, and sometimes not at all, which was a plain indication that the whole virus of the disease was expelled in the first eruption.

The practitioners perforate, with a very fine sharp-pointed thorn, the most prominent part of the pustule, and with the sides of the thorn press out the pus; and having opened about a dozen, they absorb the matter with a callico rag, dipt in warm water and milk; and proceed thus until the whole are discharged. The orifice made with the thorn is so extremely small, that it closes immediately after the matter is pressed out, so

that there is no admission of the external air into the pustule, which would suddenly contract the mouths of the excretory vessels, and consequently the farther secretion of the variolous matter from the blood would be thereby obstructed. — When, in the true confluent kind, no distinct pustules present, they perforate the most prominent and promising parts in many places, at the distance of a tenth of an inch, usually beginning at the extremities. And I have seen the pustules in the contiguous, and the perforated parts in the confluent kind, fill again before the operation has been half over; yet they do not repeat the opening till a few hours have elapsed, conceiving it proper that the matter should receive some degree of concoction in the pustules, before it is again discharged.

I do not know that this method of opening the pustules has ever hitherto been practised in Europe; but considering what Mr. Holwell has said of the great success attending it in the East Indies, and how fatal this disorder often proves, when treated in the common way here, I think it is well worth the while to give it a fair trial.

TABLE

TABLE of DIET.

The following is a Copy of the Table of Diet which was used in the Hospital all the Time I was with the Troops in Germany :

	<i>Breakfast.</i>	<i>Dinner.</i>	<i>Supper.</i>
Full diet,	{ One pint of rice gruel ; made with two ounces of rice, one spoonful of fine flower, a little common salt, and fine sugar.	{ One pound of meat.	{ As breakfast.
Middle diet,	{ As above.	{ One pint of broth, half a pound of meat.	{ As above.
Low diet.	{ As above, or according to the patient's stomach or indisposition.	{ One pint of broth ; or half a pint of panado, with two spoonfuls of wine, and a quarter of an ounce of fine sugar.	{ As breakfast.

The daily allowance of bread was a pound to those on full and middle diet ; and half a pound to those on low diet, or a pound, if so ordered by the physician.

Those on full and middle diet were allowed daily three pints of barley or rice water ; to each pint of which were added two spoonfuls of brandy, and a quarter of an ounce of lump sugar. Small beer was mentioned in the diet table ; but this we could never have good ; and therefore was not used.

Those on low diet were allowed barley or rice water ; to which some wine or brandy was occasionally added, if ordered so by the physician.

Besides this, the physician might order an additional quantity of wine, brandy, or milk, or water-gruel, or any other articles which he thought proper for the sick under his care, and which could be got easily.

P A R T V.

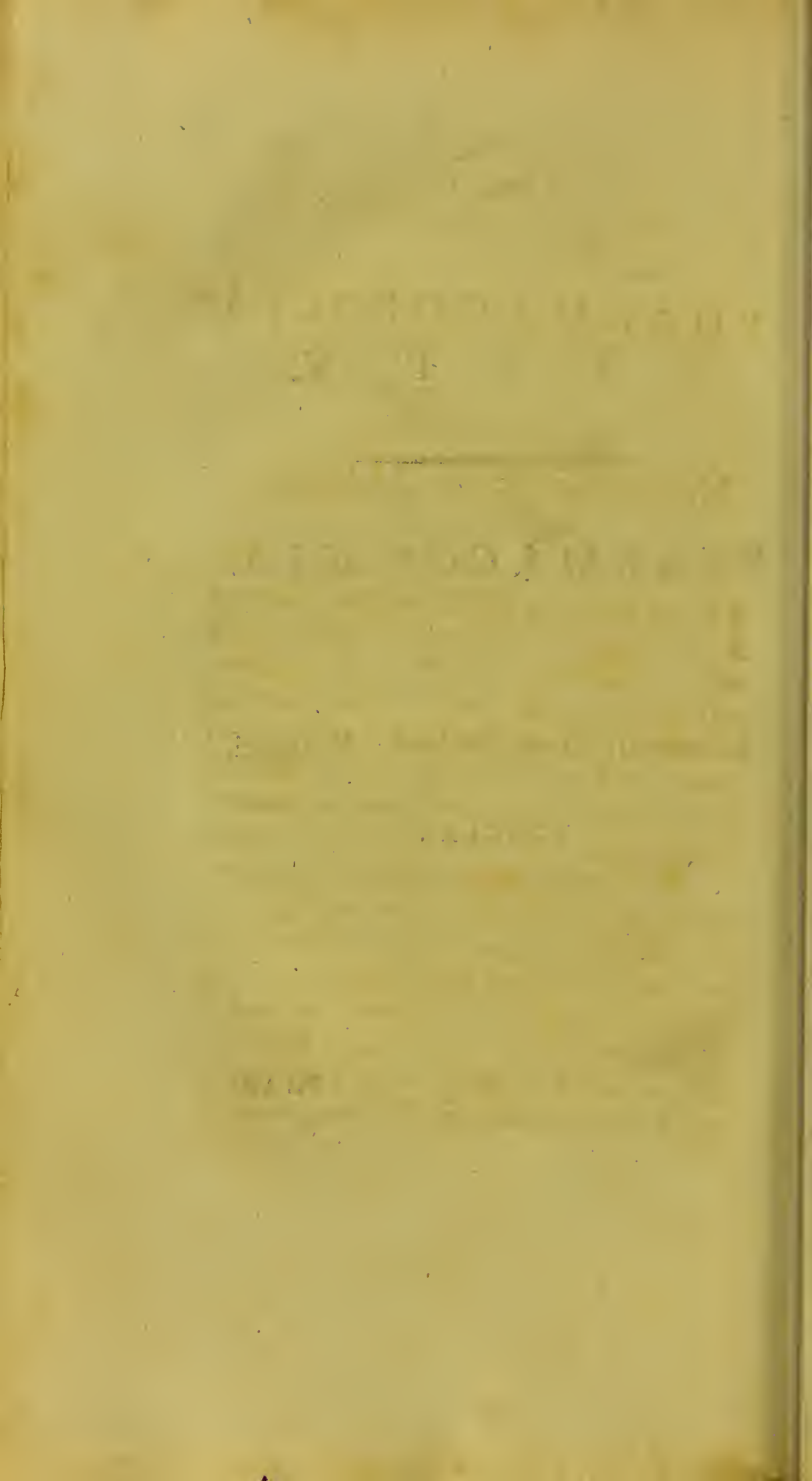
PHARMACOPŒIA.

IN USUM

Nosocomii Regii Militaris Britanici.

MDCCLXI.

PHAR-



PHARMACOPOEIA

IN USUM

Nosocomii Regii Militaris.

IN the following list of simples, intended for the use of military hospitals, such only are mentioned as can be carried about with an army; the author having omitted all those which must be used fresh, as every country and every climate affords different sorts; and it must be left to the judgment of the physicians to chuse such of them as may be useful for the troops, which the country affords. — Perhaps the author may have put into this list some which are not absolutely necessary, or omitted others which are; but such may be chosen as are most adapted to the diseases incident to the climate where the scene of action is likely to be; or others may be added which may be thought useful.

Before

—Before any armament goes from this country, proper people ought to be consulted, to determine what are the medicines which are most proper to be carried along with the hospital, and what ought to be the quantities of each, care being taken not to send out a number of useless articles, nor to send into hot climates such things as spoil before they reach the place of their destination; of which kind are confections, conserves, syrups, electaries, which soon ferment, and become useless, and likewise large quantities of powders, which are apt to become inefficacious by keeping; and what are sent ought to be very carefully put up, to prevent their being affected by heat and moisture.

MEDICAMENTA SIMPLICIA.

<i>Fruētus, baccæ atque</i>	Lini semen.
<i>semina.</i>	Nuces moschatæ.
Amygdalæ dulces.	Piper Jamaicense.
Cardamomi minoris	Sinapi semen.
<i>semina.</i>	
Hordeum.	<i>Flores.</i>
Juniperi baccæ, sum-	Chamæmeli folia &
mit. & folia.	flores.
	Crocus.

Crocus.

Lavendulæ flores.

Rosa rubra.

Herbæ & folia.

Absinthii vulg. folia.

Cicutæ folia.

Menthæ vulgaris folia.

Malvæ folia.

Rutæ folia.

Salviæ folia.

Senæ folia.

Cortices.

Aurantiorum C.

Brassicæ sylv. Jamaicensis C.

Caneſtæ albæ C.

Cinnamomi C.

Granatorum C.

Limonum C.

Peruvianus cortex.

Ligna.

Campechenſe L.

Guaiaci L. cum cortice.

Sassafras.

Radices.

Allium.

Bardanæ maj. R.

Columbæ R.

Contrayervæ R.

Gentianæ R.

Glycyrrhizæ R.

Hellebori nigri R.

Jalapii R.

Ipecacoanhæ R.

Ligni Quassiaæ R.

Mezerei R.

Petroselinii vulg. R.

Raphani rustici R.

Rhabarbari R.

Sarsaparillæ R.

Scillæ R.

Serpentariæ Virgin. R.

Simarubæ R.

Tormetillæ R.

Valerianæ sylvestris R.

Zingiberis R.

Gummi.

Gummi Arabicum.

G. tragacanthum.

Resinæ.

Resinæ.

Refina alba atque flava.

Pix Burgundica.

Thus.

Gummi resinæ.

Aloe Socotorina.

G. ammoniacum.

Assafœtida.

Gambogia.

G. guaiacum.

Myrrha.

Opium.

Scammonium

Terra Japonica.

Balsama.

Balsamum Canadense.

B. copaiva.

B. Peruvianum.

Terebinthina.

Succi inspissati.

Amylum.

Elaterium.

Glycyrrhizæ succus.

Manna.

Mel.

Saccharum.

Olea essentialia.

Ol. baccarum juniperi.

Ol. menthæ vulgaris.

Ol. menth. piperitidis.

Ol. nucis moschatæ.

Ol. pulegii.

Ol. rutæ.

Camphora.

Animalia & partes animalium.

Cantharides.

Castoreum.

Moschus.

Olea unctuosæ.

Oleum olivarum.

Axungia porcina.

Sevum bovinum & ovinum.

Sperma ceti.

Cera alba atque flava.

Olea empyreumatica.

Oleum C. cervi.

Ol. animale.

Olea

Olea mineralia.

Petroleum Barbadenſe.

Succini oleum.

*Vina & ſpiritus.*Vinum album atque
rubrum

Spiritus vini.

Spiritus vini rectifi-
catus.*Sales.*

Sales acidi

--- alcalini.

--- neutri.

Alumen.

Sapones.

Sapo albus durus.

--- niger mollis.

Sulphurea.

Sulphur.

Flores ſulphuris.

Hepar ſulphuris.

*Metallica.*Lapis calaminaris pp^t.*Tutia preparata.*

Argentum vivum.

Mercurius præcipit.
albus dulcis.----- præcipit.
ruber.----- ſublīmat.
corroſiv. albus.----- dulcis ſu-
blimatus.----- calcinatus
ruber.----- emeticus
flavus ſeu turbethum
minerale.

Antimonium.

Calx antimonii.

Sulphur auratum an-
timonii.

Tartarum emeticum.

Vitrum antimonii.

Cauſticum lunare.

Ærugo æris.

Vitriolum cœruleum.

Stanni pulvis.

Lithargyrus præpar.

Ceruſſa.

Saccha-

Saccharum saturni.	Magnesia alba.
Ferri limaturæ.	Oculi & cheli can-
Vitriolum viride.	cror. ppt.
Vitriolum album.	Testæ ostreorum pulv.
<i>Terrestria.</i>	Calx viva.
Bolus armenia.	Cauticum commune.
Creta præparata.	Testæ ostreorum cal-
Corn. cervi calcinat.	cinatæ.

P H A R M A C O P O E I A.

A C E T U M.

ACETUM lithargyrites. } Ph. Lond.
 Acetum scilliticum. }

AQUÆ SIMPLICES & SPIRITUOSÆ.

Aqua alexeteria.

—— bacc. juniperi.

—— menthæ vulgaris.

—— menthæ piperitidis.

—— nucis moschatæ.

—— pulegii.

—— rutæ.

Vel aliæ aquæ hujus generis præparari possint, terendo in mortario vitreo elaeosacchara præparata, cum oleis essentialibus, et sacchari albi 12^{la} quantitate; et dein addendo aquæ fontanæ

fontanæ vel spiritus vini tenuis quantitatem
sufficientem *.

Aqua calcis simp. Ph. Lond.

Dosis a lib. i. ad lib. ij. in die.

Aqua hordeat. Ph. Lond.

Utenda pro potu.

Aqua hordeat. febrifuga.

℞ Aq. hord. lib. ij.

Spirit. vitriol. ten. scrup. iv.

————— dulc. scrup. viii.

Sacchar. unc. dimid.

Aqua purgans.

℞ Sal cathartic. amari, unc. i. aq. puræ,
lib. fs.

B O L U S.

Bolus anodynus astringens.

℞ Theriacæ andromachi, drachm. dimid.
opii, gr. i. M. pro dosi semel vel bis die.

* Such elaeosacchara (as they are called) made by rubbing the essential oils with twelve times the quantity of sugar, may at all times be prepared at the fixed hospital, and carried about with the flying hospital, much more conveniently than the simple or compound waters themselves.

Bolus e rheo cum mercurio.

℞ Pulv. rhei gr. xxv. calomel. gr. v. syrup sacchari, q. f.

Bolus e calomel.

℞ Calomel, gr. v. conserv. rofar. scrup. i. M.

Bolus camphoratus.

℞ Camphoræ, gr. v. tere cum p æ amygdal. decortic. & adde pulv. serpentar. Virgin. gr. xv. syrup. q. f. ut fiat bolus repetend. 4^r vel 6^{ties} die.

Bolus mercurialis.

℞ Argenti vivi, gr. x. extingue in balsam. copaivi, q. f. et adde conserv. rofar. q. f.

Bolus scordio cum rheo.

℞ Elect. e scordio, scrup. i. pulv. rhei, gr. x. syrup. q. f. ut fiat bolus sumendus semel, bis, terve die.

Bolus scilliticus.

℞ Confect. cardiac. scrup. i^m. pulv. rad. scillar. exsiccat, gr. iij. syrup. zingiber. q. f. ut fiat bolus repetendus 6^{ta} vel 8^{va} quaque hora.

Cere-

Cerevisia diuretica.

℞ Rad. raphani rustican. baccar. juniperi
contus. singul. drachm. vi. sal tartari, un-
ciam dimidiam. Cerevisiæ tenuis lib. iv.
Macera per biduum, & colaturæ capiat unc.
iv. ter 4^{ve} quotidie.

COLLYRIA.

Collyrium saturninum.

℞ Sacchari saturni, gr. xij. solve in aq.
fontanæ, unc. xij. adde pro re nata tinct.
thebaicæ, drachm. i.

Collyrium vitriolicum.

℞ Vitrioli albi, drachm. fs. solve in aq.
fontanæ, lib. i.

Confectio cardiaca. Ph. Lond.

Conserv cynosbat. Ph. Lond.

Conserva rosar. Ph. Lond.

DECOCTA.

Decoctum album. Ph. Lond. utendum pro
potu.

Decoctum arabicum.

℞ Gum arabici, unciam i^m. sacchar. albi, unc. dimid. coque in aq. hordeatæ bullientis, lib. ij. ad solutionem gummi, & adde sacchari unc. dimidiam : utend. pro potu.—addi possit pro re nata spirit. nitri dulcis, drachm. ij.

Decoctum bardanæ.

℞ Rad. bardanæ majoris, unc. ij. aquæ puræ, lib. ij. ss. coque ad lib. ij. & colaturæ, adde aquæ nucis moschat, unc. i. sacchar. alb. unc. dimidiam.

Decoctum Campechense.

℞ Scob. ligni Campechensis, uncias iij. coque in aq. puræ, lib. iv. ad lib. ii. addendo sub finem coctionis cort. cinnamomi, drachmas ii. cola.

Decoctum corticis Peruviani.

℞ Cort. Peruv. crass. pulv. unc. ii. coque in aq. fontan. lib. iij. ad lib. ij. Colaturæ adde pro re nata tinct. cort. Peruv. unc. ij. Dosis ab uncia i. ad unc. iv. bis ter. quaterve die.

Decoct.

Decoët. cort. Peruv. astringens.

Fit addendo decoëto Cort. Peruv. sub finem coëtionis, corticis granatorum, unciam dimidiam, cort. cinnam. drachm. i^m, dofis ab uncia i^{na} ad unc. iij. ter 4^{rve} in die.

Decoëtum cort. cum serpentaria.

Fit addendo decoëto cort. Peruv. sub finem coëtionis, rad. serpentariæ Virgin. contuf. unc. dimid. Dofis ab unc. i. ad unc. iij, ter quaterve die.

Decoët. commun. pro clyfter.

℞ Flor. vel herb. chamamel. unc. i. coque in aq. fontan. lib. i. fs. ad lib. i. & cola.

Decoëtum cretaceum.

℞ Gummi arabici, unciam dimidiam, cort. canellæ albæ, drachm. dimid. coque in aq. puræ, lib. ii. fs. ad folutionem gummi, & dein adde.

Cretæ albæ, pptæ, unciam i^m.

Sacchari albi, drachm vi. M.

Decoëtum ligni guaiaci.

℞ Ligni guaiaci raf. lib. fs. aq. fontanæ bullientis, cong. ij. macera per noctem ;

U 3

mane

mane coque ad congium. i. & cola; capiat a lib. fs. ad lib. ij. die.

Decoctum nitrosum.

℞ Coccinel. scrupul. i. coque in aq. fontan. lib. ij fs. ad lib. ij. & dein adde salis natri, unc. i. sacchar. albi fescunc. Colaturæ addi possit pro re nata aquæ alicujus spirit. unc. ij. Dosis ab unc. i. ad unc. iv. 4tis vel 6tis horis.

Decoctum pectorale.

℞ Fol. herb. malvæ, unc. ij. Rad. eryngii unc. dimid. coque in aq. fontan. lib. iv fs. ad lib. iv. addendo sub finem coctionis rad. glycyrrhiz fescunc. vel mellis optimi, unc. i. Cola pro potu.—Adde pro re nata aceti, fescunc.

Decoctum rad. sarsaparillæ.

℞ Rad. sarsaparillæ, unc. iij. infunde per horas 12. in aq. fontan. lib. iij. & dein coque ad lib. ij. adde sub finem coctionis ligni sassafras, drachm. i. rad. glycyrrhizæ, drachm. ij. Adde pro re nata sub finem coctionis. Rad. mezerei drachm i^m. Colaturæ capiat a lib. i. ad lib. ij. quotidie.

E L E C-

E L E C T A R I A.

Elect. astringens.

℞ Specier. e scordio, pulv. e tragacanth. comp. ana unc. i. tincturæ thebaicæ, drachm. ij. syrup sacchari, q. s. ut fiat elect. Dosis ad molem N. M. bis, ter, quaterve in die.

Elect. corticis Peruviani.

℞ Pulv. cort. Peruv. unc. iv. Conf. rosar. drachm iv. syrup e cort. aurantiorum, q. s. Dosis a scrup. i. ad. drachm. unam, bis, ter, 4^r 6^{ies} vel decies die.

Elect. corticis anodynum.

℞ Elect. cort. Peruv. unc. i^{nam} elect. e scordio unciam dimidiam, vel tinct. thebaicæ scrup. ij.

Electarium cortic. Peruv. pectorale.

℞ Pulv. cort. Peruv. unc. ij. Conserv. cynosbel. drachm. ij. Extracti glycyrrhizæ solut. in aq. puræ ad spissitudinem syrupi, q. s. ut fiat electarium.

Elect. cort. cum serpentaria.

℞ Elect. cort. Peruv. unc. i. pulv. rad. serpentar. Virgin. cort. canel. alb. ana, drach. ij. syrup. q. s.

Elect. e baccis lauri. Ph. Lond.

Elect. lenitiv. Ph. Lond.

Elect. lenitivum compositum.

℞ Elect. lenitiv. lib. i. pulv. jalap. unc. i. sal. nitri, drachm. ij. syrup. q. s. Dosis a drach. i. ad drach. iv. pro re nata.

Elect. lenitivum balsamicum.

℞ Elect. lenitiv. comp. unc. ij. bals. copiv. unc. i. gum. guaic. unc. ss. M. Dosis, cochleare theæ, h. s. vel mane & vesp̄ri.

Electar. e scordio vel diascordium. Ph. Lond.

Elect. e spermat. ceti cum balsamo.

℞ Balsam Peru. unc. i^m. misce optime cum mucilag. gum. arab. fescunciam & adde spermat. ceti, conserv. rosar. ana unc. iii. syrup sacchar. q. s. dosis, a dimidiâ drachma bis die ad drachm. i^m quater vel sexties die.

Elect.

Elect. sulphuratum.

℞ Elect. lenitiv. unc. ij. Flor. sulphur.
unc. dimid. Dosis a drachm 1^{na} ad unc. di-
midiam.

Elect. e scammon. Ph. Lond.

E L I X I R.

Elix. aloes. Ph. Lond.

Elix. paregoricum. Ph. Lond.

Elix. vitrioli. acid. Ph. Lond.

E M U L S I O N E S.

Emulsio amygdal. dulc. comm. Ph. Lond.

Emulsio ceræ.

℞ Ceræ albæ vel flavæ drachm. iij. sa-
pon. dur. Hispan. drachm. fs. aq. puræ unc.
iij. coque leni igne, assidue movens ut probe
misceantur; & dein infunde in mortarium
marmoreum & adde paulatim aq. puræ unc.
xxx. Sacchar albi drach. vi. & misce opti-
me terendo pistillo ut fiat emulsio colenda
cui adde aquæ alicujus spirituosæ unc. 1^m.

E N E-

E N E M A T A.

Enema commune laxativum.

℞ Aq. fontan. calid. unc. xij. sal. cathartici amari, unc. i. fs. M.

Enema commun. oleosum.

℞ Aq. fontan. bullient. unc. x. mucilag. gum arabic. i^m. olei olivar. unc. ij. adde pro re nata elect. e scordio, drachm. ij. vel tinct. thebaic, drachm. i.

Enema ex amylo.

℞ Aq. fontan. calid. unc. iv. gelatin. amyli, unc. v. elect. e scord. drachm. i. M.

Enema terebinth.

℞ Terebinth commun. drachm. vi. solve vitello ovi & adde enem. oleos. unc. x.

E M P L A S T R A.

Emplastrum commune

----- adhæsivum

----- cum gummi

----- cum mercurio

----- roborans -----

----- e sapone -----

----- stomachicum -----

Ph. Lond.

Em-

Emplastrum vesicatorum. Ph. Lond.

Extracta.

Extractum corticis Peruviani. Ph. Lond.

Extractum ligni Campechensis.

F O T U S.

Fotus communis.

℞ Fol. malv. flor. chamamel. singulorum,
m. i. coque in aq. fontan. q. s.

Fotus commun. spirit.

℞ Fotus commun. lib. ij. aceti, lib. i. spi-
rit. vini tenuis, lib. ss. M. pro fotu.

Fotus cum sale ammoniac.

℞ Fotus commun. lib. ij. sal ammoniac
crud. unc. i.

Fotus volatilis.

℞ Fotus comun. q. s. asperge panno sta-
tim ante applicationem spiritus sal. ammo-
niac. q. s.

G A R G A R I S M A T A.

Gargarisma commune.

℞ Aq. hordeat. unc. xij. sal. nitri, drachm.
i. mellis semunc. M. adde pro re nata spirit.
vin. unciam i.

Gar-

Gargarisma acidum.

℞ Aq. hordeat. unc. xij. spirit. vini Gallici, unc. i. aceti fescunc. tinct. myrrhæ, drachm. ij. M.

Gargarisma volatile.

℞ Aq. hordeat. unc. xij. spirit. vin. Gallic. unc. ij. sal. vol. ammoniaci, drachm. i. M.

GUTTÆ ANTIMONIALES
ANODYNÆ.

℞ Vini antimonialis, unc. i. fs. tinct. thebaic. drachm. iv. Dosis a gutt. 30 ad 40 bis terve in die, vel a gutt. 60 ad 140, h. f. in potu tepido.

H A U S T U S.

Haustus simplex.

℞ Aq. fontan. fescunc. spirit. vini Gallici drachm. i. fs. sacchar. alb. drachm. dimidiam M.—Haustus præparari possit aqua aliqua simp. et spirit. loco aq. fontan. & spirit. vini Gallici pro re nata.

Haustus anodynus.

℞ Haust. simp. fescunc. tinct. thebaic. gutt. xx. M.

Haustus

Haustus camphoratus.

℞ Camphoræ, gr. v. tere in mortario cum sacchar. alb. drach. dimid. & dein adde mucilag. gum arabici, drachm. ij. haust. simp. fescunciam. M. f. a. Dosis repetenda, 4^{ta} vel 6^{ta} quaque hora.

Haust. emetic. antimonialis.

℞ Vini antimonialis fescunciam. Dari possit ad drachm. x. pro r. n.

Haust. emeticus scilliticus.

℞ Oxymel, scillit. drachm. x. aq. fontan. fescunc. pulv. rad. ipecacoan. gr. vi.

Haustus cardiacus.

℞ Haust. simp. fescunciam confect. cardiac. scrup. i^m. M. f. haustus repetendus 4^{tis} vel 6^{tis} horis—adde pro re nata sp. lavend. comp. dr. i.

Haustus cardiacus oleosus.

℞ Ol. essential. menth. gutt. ij. tere in mortario vitreo cum sacchar. alb. drachm. dimid. & adde haust. simplicis fescunc. tinct. stomachic. drachm. i. M.—adde pro re nata tinctur. thebaic. gutt. x.

Vel,

Vel,

℞ Ol. essential. menthæ vulg. gutt. iiii.
tere optime cum sacchar. alb. drachm. dimi-
diam spirit. vini Gallici sesquidrachm. & dein
ad Vitelli. ovorum ij. Aq. puræ fescunciam
spirit. lavendul. comp. drachm. 1^m. M.

Hauftus hydragogus ex elaterio.

℞ Hauftus salini communis fescunciam in
qua solve elaterii gr. iiii. ut fiat hauftus su-
mendus primo mane.

Hauftus lixiviosus anodynus.

℞ Hauft. simp. fescunciam, lixivii tartari,
drachmam dimidiam tincturæ thebaicæ, gutt.
xx. cap. h. s. vel mane & vesperi.

Hauftus e mithridatio.

℞ Hauft. simp. fescunc. mithridat. scrup.
i. aceti vin. drachm. iij. dosis repetenda 4^{tis}
vel 6^{tis} horis.

Hauftus oleosus communis.

℞ Mucilaginis gum. arabici, olei olivarum,
singulorum unciam dimidiam, misce, s. a.
& adde hauft. simp. unc. 1^m. Misce fiat
hauftus repetendus. 4^{ta} vel 6^{ta} quaque hora.

Hauftus

Haustus oleosus cum rheo.

℞ Haust. oleos. communis, unc. ij. pulv. rhei, gr. xxv. tinct. thebaic gutt. xv. M. fiat haustus sumendus vel h. f. vel primo mane.

Haustus purgans.

℞ Infus. senæ unc. iij. sal. glauber. drach. iij. tinct. senæ drachm. ij. sacchar. alb. drachm. dimid. capiat mane.

Haustus salinus communis.

℞ Aceti vinosi vel succ. limonum semunciam, sal. absynth. scrup. i. vel ad saturationem, haust. simp. fescunciam adde pro re nata pulv. contrayerv. comp. scrup. i. vel pulv. contrayerv. cum nitro, scrup. ij.—Haustus præparari possit cum salis diuretici drachma dimid. loco acidi & salis absynthii. Dosis repetend. 3^{tis} 4^{tis} vel 6^{tis} horis—Eodem modo fit haustus cum spirit. Mindereri uncia dimidiâ.

Haust. salin. cum confect. cardiaca.

℞ Haust. salin. commun. unc. ij. confect. cardiac. scrup. i. M. repet. 4^{tis} vel 6^{tis} horis.

Haust.

Hauft. falin. cum mithridatio.

℞ Hauft. falin. commun. unc. ij. mithridatii, scrup. i. M. fumend. 4^{tis} vel 6^{tis} horis.

Hauftus falin. cum rheo.

℞ Hauft. falin. com. uncias ij. pulv. rhei, drachmam dimidiam. M. capiat mane.

Hauftus falin. cum phu.

℞ Hauft. falin. commun. unc. ij. pulv. rad. valerian. fylvestris, scrup. ij. Dosis repetend. 2^{dis} vel 6^{tis} horis.

Hauft. falinus succinatus.

℞ Hauft. falin. commun. unc. ij. fal succini, pulv. caftorei fingulorum, gr. x. H. repetend. 4^{tis}. vel 6^{tis}. horis.

Hauft. falinus purg. oleofus.

℞ Mannæ op^t. drachm. ij. olei olivar. unc. fs. vitelli ovi q. f. tere in mortario, addendo paulatim fal cathartici amari, unc. i. folutam in aq. fontan. calid. unc. iij. fpirit. vini gallici vel aq. alicujus fpirituofæ, drachm. iij. M. f. a. pro dofi matutino.

Hauftus

Hauftus volatilis.

℞ Hauſt. ſimp. ſeſcunciam. ſal. vol. c. cervi,
gr. x. M. fiat H. repet. 4^{tiſ} vel 6^{tiſ} horis.

Hauſtus volat. oleoſus.

℞ Hauſt. volat. ſeſcunciam, ol. olivar. unc.
dimidiam. M.

I N F U S A.

Infuſum amarum. Ph. Lond.

Addi poſſit pro re nata in præparando ſpi-
rit. vini tenuis, lib. ſs. ad lib. ij. infuſi. Do-
ſis eſt ab unc. i^{na} bis die ad unc. ij. ter die.

Infuſum rad. ligni quaſſiæ.

℞ Rad. lign. quaſſiæ drachm i^m infunde in
aq. puræ bullient. lib. i. per noctem; & co-
laturæ capiat. unc. i^m vel ij^s omni 2^{da} vel
3^{tia} hora.

Infuſum raphani ruſtici.

℞ Rad. raphani ruſtici, unc. ij. baccar.
juniper. unc. i^{nam} cort. canell. alb. drach. ij.
aq. fontan. bullient. lib. iv. infunde per noc-
tem leni calore. Colaturæ adde ſpirit. vini

Gallici unc. iv. Dosis ab. unc. i. bis terve die
ad unc. iv. 6^{ti}s horis.

Infusum senæ commun. Ph. Lond.

JULEPUM E MOSCHO.

℞ Mosch. drachmam i^m tere optime in
mortario cum sacchar. alb. drachm. iij. &
adde mucilagin. gum arab. dr. iv. Haust.
simp. unc. vi. Dosis unc. ij. 4^{ti}s vel 6^{ti}s horis.

L I N C T U S.

℞ Conserv. cynosbat. unc. iv. ol. olivar.
syrup. sacchari vel mellis ana unc. ij. adde
pro re nata spirit. vitrioli tenuis, drachm. ij.
Dosis cochleare theæ urgente tussi.

Linctus laxativus.

℞ Ol. olivar. (vel amygd.) mannæ opti-
mæ singulorum unciam unam. syrupi rosa-
rum solutivi unciam dimidiam; adde pro re
nata tincturæ jalapii drachmas ij.

L I N I M E N T A.

Liniment. saponaceum. Ph. Lond.

Lini-

Linimentum camphoratum.

℞ Olei olivar. unc. ij. axung. porcinae unc.
dimid. camphoræ, drachm. ij. M.

Linimentum volatile. Ph. Lond.

Linimentum volatile commune.

℞ Olei olivar. unc. iij. spiritus salis ammoniaci, dr. vi. M.

Lixiv. saponarium. Ph. Lond.

M E L L A.

Mel cum borace.

℞ Mellis optimi, unc. i. pulv. subtilissim.
boracis, dr. i. M.

Mel Ægyptiacum. Ph. Lond.

Mel rosaceum. Ph. Lond.

MITHRIDATIUM. Ph. Lond.

M I X T U R Æ.

Mixtura acida communis.

℞ Haust. simp. unc. x. spirit. vitrioli tenuis drachm. i^m vel ad gratam aciditatem.
Dosis ab. unc. ij. ad unc. iv. 4^{tis} vel 6^{tis} horis.

X 2

Mix-

Mixture ammoniac.

℞ Gum ammoniaci, drachm. i. solve in haust. simp. unc. vi. Dosis ab. unc. i. ad unc. ij. bis terve in die.

Mixture ammon. cum oxymel.

℞ Mixt. ammoniac. unc. vi. oxymel scillit. drachm. vi. Dosis a cochlear. i. ad unc. ii. ter 4^{re} die.

Mixture ammoniac. anodyna.

℞ Mixt. ammoniac. cum oxymel. unc. vi. tinct. thebaic. drachm. dimid. Dosis a cochlear. i. ad iv. 4^{tis} vel 6^{tis} horis.

Mixture Campechensis.

℞ Extract. ligni Campechensis, drachm. iij. solve in haust. simplic. unc. vi. adde pro re nata tinct. thebaic. gut. xxx. vel Philon. Londinen. drachm. i. Dosis ab. unc. i. ad unc. iij. bis, ter, 4^{re} die.

Mixture fœtida.

℞ G. affafœtid. drachm. i. solve in haust. simp. unc. vi. Dosis ab. unc. i. ad unc. iij. 4^r. die.

Mixture

Mixture foetida volatilis.

℞ Mixture foetid. unc. vi. spirit. volat. sal. ammon. drach. i. Dosis ab. unc. i. ad unc. ij. bis, ter, 4^{re} die.

Mixture Fracastorii.

℞ Haust. simp. unc. viij. Elect. e scordio, drachm. iv. Dosis ab. unc. i. ad unc. ij. 4^{tis} vel 6^{tis} horis.

Mixture Japonica.

℞ Haust. simp. unc. vi. tinct. Japonic. unc. i. adde pro re nata tinct. thebaic. dr. i.

Mixture laxativa.

℞ Fol. fenæ drachm ij. Mannæ semunc. coque in aq. fontan. unc. xviii. ad unc. xvi. Colaturæ adde sal. cathartici amari. fescunciam. spirit. vini Gallici, unc. i. Dosis unc. ij. omni hora donec laxetur alvus.

Mixture mercurialis.

℞ Argenti vivi drachm. i^m. G. arabic. pulv. drach. ij. Syrup. sacchar. unc. dimidiam tere in mortario marmoreo donec argentum vivum apparere desinat, & dein adde aq. puræ, unc. vi. aq. nuc. moschat. unc. i^m. M. Dosis ab uncia dimidia ad uncias ij. semel vel bis die.

Mixture purg. antimonial.

℞ Elect. lenitiv. fescunc. mannæ femunc.
coque in aq. fontan. unc. xx. ad unc. xvi.
& dein solve tartar. emetici, gr. x. Colaturæ
dosis est ab unc. i. ad unc. iv. omni hora vel
omni 2^{da} vel 3^{tia} vel 4^{ta} hora. donec laxetur
alvus.

Mixture purg. antimonialis mitior.

℞ Tartar. emetic. gr. iv. mannæ, unc. ij.
solve in aq. hordeat. bullient. unc. xv. & co-
laturæ, adde aq. menthæ simp. unc. i. M.
Dosis ab unc. i. ad unc. iv. omni hora dimi-
dia donec laxetur alvus, vel cietur vomitus.
Addi possit pro re nata tartar. solub. unc.
dimid. vel sal. rupellensis, unc. i^m.

Mixture oleosa volatilis.

℞ Haust. simp. unc. vi. ol. olivar. unc. iij.
spirit. volatil. falis ammoniaci, drachmam
i^{nam}. M. Dosis ab unc. i. ad unc. iij. 3^{tiis}
vel 4^{tis} horis.

Mixture scillitica.

℞ Haust. simp. unc. vi. oxymel. scillitic.
drachm. vi. Dosis a drachm. iv. ad unc. ij.
bis, ter, 4^{rve}. die.

Mix-

Mixtura e spermat. ceti.

℞ Spermat. ceti, drachm. ij. solve in vitello ovi & adde haust. simp. unc. vi. adde, pro re nata, tinct. thebaic. scrup. ij. Dosis ab unc. i. ad unc. ij. 4^{tis} vel 6^{tis} horis.

Mixtura e spermat. ceti cum balsamo.

℞ Balsam. copaiv. drachm ij. tere in mortario cum mucilag. gum arabici, drachm iij. & dein adde mixtur. e spermat. ceti, unc. vi. Dosis ab unc. i. ad unc. iij. 4^{tis} vel 6^{tis} horis.

MUCILAGO. G. ARABICI.

℞ G. arabici pulv. unc. iv. solve in aq. puræ bullient. unc. x.

Oxymel scillit. Ph. Lond.

Philonium Londinen. Ph. Lond.

PILULÆ.

Pilulæ aloeticæ.

℞ Aloes Socotrinæ, drachm. ii. sapon. alb. dur. extract. rad. glycyriz singul. drachm i. elix^r. aloes, q. s. ut fiant pilulæ Lx. quarum. Dosis est a pilulis ii. ad pilul. x.

X 4

Pilulæ

Pilulæ fœtidæ.

℞ Gum afaœtid. myrrh. ana drachm. ij.
 sapon. alb. drachm. i^m. Tinct. fuliginis, q. f.
 Dosis a gr. x. ad drachm. dimid. bis terve die.

Pilulæ e gambogia.

℞ G. gambogiæ, drachmam dimidiam,
 tere optime in mortario marmorio cum cre-
 moris tartari, scrupulo uno, & adde pulv.
 radicis zinziberis, gr. xv. syrup. sacchari,
 q. f. ut fiant pilulæ xviii. quarum dentur sex
 pro dosi primo mane.

Pilulæ guaiac.

℞ Sapon. albi Hispanici semunc. gum
 guaiac. scrup. iv. syrup. q. f. Dosis a scrup. i.
 ad drachmam dimidiam bis terve die.

Pilulæ gummosæ. Ph. Lond.

Pilulæ mercuriales.

℞ Argenti vivi semunc. extingue in balsam.
 copaiv. q. f. & adde pulv. glycyrrhiz. gum
 guaiac. singulorum, drachm. vi. syrup. q. f.
 ut fiat massa. Dosis a scrup. fs. ad drachmam
 dimidiam semel vel bis die.

Pilulæ

Pilulæ mercuriales hydrogogæ.

℞ Extracti cathartici, argenti vivi singul. scrup. i^m. tere ad extinctionem globulorum mercurii, & dein adde syrup simp. q. s. ut fiant pilul. v. sumend. pro dosi.

Vel

℞ Mercurii sublimati dulc. gr. xv. extract. cathartici, gr. x. syrup simp. q. s. ut fiant pilul. v. sumend. pro dosi.

Pilulæ pectorales.

℞ G. ammoniac, drachm. ij. pulv. rad. enulæ campanæ, balsam. sulphuris sing. drachm. i^m. syrup. sacchar. q. s. ut fiant pil. xvij. quarum capiat vi. ter 4^{rve}. quotidie.

Pilulæ Plummeri.

℞ Mercur. dulc. sublimat. alb. sulphur. aurati antimonii singul. drachm. ij. tere optime in mortario vitreo, ut intime misceantur; & dein adde g. guaiac. drach. iij. resin. guaiaci, drachm. i. balsam. copaivi, q. s. ut fiat massa dividenda in pilulas granorum quinque. — Dosis est a granis x. ad drachmam unam bis, ter, quaterve in die.

Pilulæ

Pilulæ Rufi. Ph. Lond.

Pilulæ saponaceæ. Ph. Lond.

Pilulæ rhabarb.

℞ Sapon. alb. Hispanici, drachm. vj. pulv. rhei, drachm. ij. syrup. sacchari, q. f. Dosis a scrup. i. ad scrup. ij. bis terve die.

Pilulæ scilliticæ.

℞ Pulv. rad. scill. exsiccat glycyriz. rad. zinziber. sapon. alb. Hispan. singul. drachm. ij. syrup. q. f. Dosis a. gr. iv. ad gr. xvi. bis terve die.

Pilulæ stomachicæ.

℞ Pulv. canell. alb. drachm. ij. extract. rad. gentian. dr. i. mucilag. gum. arabici q. f. Dosis a scrup. i. ad drachmam dimid. bis die — adde pro re nata rubigin. martis drachmam dimid.

P U L V E R E S.

Pulvis aluminosus.

℞ Alumin. crud. terræ Japonicæ anā partes æquales dosis a gr. viij. ad drachmam dimidiam.

Pulv.

Pulv. anodynus Doveri.

℞ Sal. nitri, tartari vitriolati singulorum, unc. iv. in crucibulum candens injice, agitur donec deflagratio & scintillatio desinat, & adde opii concisi, unc. i. & in pulverem redige: addendo rad. glycyrrhiz. ipecacoanhæ subtilissime pulver. ana, unc. i. & dein probe misceantur omnia. Dosis a gr. x. ad scrup. ii. vel ad drachmam 1^{am}.

Pulvis antimonialis.

℞ Calcis antimonii lotæ, drachm. xi. tartari emetici, dr. i. M. fiat pulv. subtilissimus. Dosis a gr. iij. ad gr. x. 4^{ta} vel 6^{ta} quaque hora.

Pulvis antimonialis cum mercurio.

℞ Pulveris antimonialis, drachm. ij. mercurii calcinati, gr. iv. tere optime in mortario marmoreo, ut intime misceantur, & ut fiat pulvis subtilissimus. Dosis a granis ij. ad gr. x. quartis vel sextis horis, vel ad scrup. 1^m. vel drachmam dimidiam, si utetur pro emetico, vel ad alvum fortiter purgandam.

Pulvis antimonialis purgans.

℞ Antimonii cathartici, ʒß. tartari emetici, gr. xv. tere optime ut fiat pulvis subtilissimus. Dosis a. gr. i. ad gr. iij.

Pulvis

Pulvis cardiacus.

℞ Pulv. canell. alb. drachm. i. rad. zinziberis, drach. iii. M. Dosis a scrup. fs. ad drach. i. 4^{tis} vel 6^{tis} horis.

Pulvis chamæmelinus.

℞ Pulv. flor. chamæmel. drachm iij. aluminis, g. myrrh. ana drachm. i. Dosis a scrup. i. ad scrup. ij.

Pulv. contrayerv. comp. Ph. Lond.

Pulv. contrayerv. cum nitro.

℞ Pulv. contrayerv. comp. unc. iv. salis nitri, drachm. i. M. Dosis a scrup. i. ad drachm. i. 4^{tis} vel 6^{tis} horis.

Pulvis emeticus.

℞ Pulv. ipecacoanhæ, scrup. i. tartar emetici, gr. ij. Dosis a gr. xi. ad gr. xxii.

Hiera picra. Ph. Lond.

Pulv. ipecacoanhæ cum opio.

℞ Pulv. rad. ipecacoan. gr. x. opii, gr. ij. Dosis a gr. iij ad gr. xij.

Puly.

Pulv. e jalapio.

Pulv. rad. jalapii, drachm. vi. rad. zinzib.
drachm. ij. Dosis a scrup. i. ad scrup. ij.

Pulv. jalapii cum nitro.

℞ Pulv. rad. jalap. drachm. iv. salis nitri,
drachm. i^m. Dosi a scrup. i. ad scrup. ij.

Magnesia alba.

Pulv. nitrosus.

℞ Pulv. e chel. cancror. drachm. iij. nitri,
drachm. ij. M. Dosis a scrup. i. ad scrup. ij.
vel ad drachmam. i.

Pulv. nitrosus camphoratus.

℞ Pulv. nitros. scrup. ij. camphoræ, gr. x.
M. Dosis a scrup. dimid. ad scrup. i.

Pulv. nitrosus cum gum guaic.

℞ Sal. nitri, drachm. ij. gum guaiac.
drachm. i. Dosis a gr. v. ad drachm. dimid.

Pulv. Plummeri.

℞ Calomel. sulph. aurat. antimonii ana,
dr. ij. tere in mortario ut fiat pulv. subtilissi-
mus. Dosis a gr. ij. ad gr. x. vel ad scrup. i^m.

Pulvis stanni. Ph. Lond.

Pulv.

Pulv. e. spermat. ceti cum nitro.

℞ Spermat. ceti, drachm. ij. sacchar. albi
fal. nitri ana unc. i^m. Dosis a scrup. dimid.
ad drachmam i.

Pulvis sulphuratus.

℞ Flor. sulphur. fal. nitri, cryſtall. tartari
ſingul. drachm. iij. M. & fiat pulvis ſubtiliſ-
ſimus cujus capiat, a gr. x. ad drachm. i.
ter. 4^{rve}. quotidie.

Pulv. e tragacanth: Ph. Lond.

S A L E S A C I D I.

PRÆPARTIONES.

Acida mineralia	{	Spir. vitrioli fortis	{	Spir. vitrioli dulc.		Æther.
		—————tenuis				
		Spiritus nitri				
		Spir. falis marini		Spir. falis dulcis		

Varietat. acid. veget.	{	Acetum.
		Spiritus aceti vel acetum diſtillatum.
		Succus limonum.
		Criſtalli tartari.

Acid. a- nomal.	{	Sal. ſuccini.
		Sal. ſedativus Hombergeri.

S A L E S

SALES ALCALINI.

Alcal. veget.	{	Sal absynthii.
		Sal tartari.
Alcal. min.	{	Sal alcali mineral. seu foda, seu natrum.
Alcal. vol.	{	Sal volatilis c. cervi.
		Sal volatilis sal ammoniaci

SALES NEUTRI.

SALES NEUTRI, qui fiunt ex ALCALI et ACIDO.

Varietates salis neutri comp. ex alcal. & acid. vegetab.	{	Tartarus vitriol.	vegetab.		vitrioli.
		Sal. Glauberi	minerali		
		Sal. am. vitrioli	volatili		
	{	Sal. nit. com.	vegetab.		nitri.
		Nit. cubicum	mineral.		
		Sal. am. nitrosum	volatili		
	{	Sal. digest. sylvii.	vegetabil.		Sal. marini.
		— marin. com.	minerali		
		— ammon. com.	volatili		
	{	Sal diureticus.	vegetab.		aceti.
Tartar. tartar.		veget. tartari	cryst. tartar.		
Sal citratus com.		veget. absynth.	succ. limonum.		
Sal de feignette		minerali	cryst. tartar.		
Spir. Mindereri.		volatili.	acet. distillat.		

Hi omnes sales neutri præparari possint pro usu medico admiscendo alcali & acidum ad saturationem ; alii vero in crystallos redacti, s. a. commodius circumferuntur pro usu militari ; alii ut sal. citratus comm. et spiritus Mindereri facilius præparantur admiscendo alcali & acidum ad saturationem pro re nata *.

Sinapismus.

℞ Semin. finap. pulv. subtiliss. micæ panis singulor, lib. ss. aceti optimi, q. s. ut fiant sinapismi applicandi plantis pedum.

Solutio mercurii corrosivi sublimati.

℞ Mercur. corrosiv. sublimat. gr. vi. spir. vini Gallici, unc. xii. M. fiat solutio. Dosis a semunc ad unc. i. die.

Solutio tartari emetici.

℞ Tartar emetici, gr. iv. aq. puræ, ℥viii. aq. nuc. moschat. unc. dimid. M.

* This table of neutral salts is nearly the same as one I have seen, which was said to be a copy of that given yearly by Dr. Cullen, professor of chemistry in the university of Edinburgh, to his pupils ; and as that published by Dr. Vogel, in his Institutiones Chimiæ, sect. 629. These neutral salts are likewise taken notice of by Macquer, in his Éléments de Chymie, and other late chemical authors.

Species

Species aromaticæ. Ph. Lond.

----- e scordio. Ph. Lond.

Tartar. emetic. Ph. Lond.

Theriaca andromachi. Ph. Lond.

TINCTURÆ.

Tinctura amara.

----- corticis Peruv.

----- Japonica.

----- melampodii.

----- Mart. in sp. falis.

----- myrrhæ.

----- sacra.

----- saturnina.

----- senæ.

----- serpentariæ.

----- thebaica.

} Pharm. Lond.

Tinctura rhei.

℞ Pulv. rad. rhei, unc. ij. femin. cardamom. minor. decortic. semunc. vini alb. hisp. lib. ij. sp. vini Gallici, unc. viij. digere sine calore & cola. Dosis ab unc. i. ad unc. iij.

Tinctura stomachica.

℞ Cort. canell. alb. semunc. cort. auran-
tior. unc. i. femin. cardam. minor. decort.
drachm. ij. spirit. vini Gallici lib. ij. digere
fine calore & cola. Dosis a semunc ad unc. i.
bis terve die. — Adde pro re nata vin. alb.
Hisp. lib. i.

U N G U E N T A.

Unguentum album.

———— basilicon flavum.

———— ——— viride.

———— cœruleum fortius.

———— ——— mitius.

———— sambucinum.

———— saturninum.

———— e sulphure.

———— tutiæ.

———— ad vesicatoria.

} Ph. Lond.

V I N A.

Vinum amarum.

——— antimoniale.

——— chalybeatum.

} Ph. Lond.

VITRUM CERATUM ANTIMONII.

P O S T-

P O S T S C R I P T.

CONTAINING

A N A N S W E R

T O

Dr. MILLAR's REMARKS AND TABLES,

Said to be Monthly Returns from the British Military Hospitals in Germany during the late War.

SINCE the last edition of this work was published, I accidentally met with a Treatise entitled, *Observations on the Practice in the Medical Department of the Westminster General Dispensary; together with an arithmetical Calculation of the comparative Success of various Establishments for the Relief of the Sick*, published in the year 1777, by Dr. John Millar, physician to the above-named dispensary.

Upon perusal, I was not a little surprised to find tables, said to be returns of the number of sick sent to the British general hospitals in Germany during the late war, and of the number of men who died in them;

Y 2

which

which the doctor, in his table shewing the proportion of deaths to the number of sick in different places, has made amount to more than one half; and on the faith of these fictitious returns has, in the end of his work, made some very severe and disingenuous remarks on the former edition of my Account of the Diseases of the Army, and on the conduct of the physical gentlemen employed on the German service during the late war. This surprised me the more, as Dr. Millar was an entire stranger to me; and, upon examination, I found that he was an equal stranger to all the physicians and surgeons who were employed on the German service.

If Dr. Millar had confined himself to mere abuse and ill-natured remarks on my work, I should certainly have passed his observations unnoticed, and left the practice here recommended to have been approved of or condemned, as it might be found to deserve; and my own conduct in the military hospitals to have been justified by the physical gentlemen who were eye-witnesses of it, many of whom are now settled in London, and in different parts of England; conscious that illiberal ill-grounded reflections, generally

rally in the end reflect discredit on their authors.

But the Doctor having published counterfeited returns drawn up in the form of genuine, and having, every where he went, insinuated that he had them from Lord Granby's secretary, military officers, accustomed to regular returns, might (unless informed to the contrary) believe these to be true copies of the general hospital returns sent to Lord Granby, and that of course the reflections made by the Doctor were just; and therefore I could not pass his work unobserved, nor help endeavouring to do justice to myself, as well as to the other physicians employed on the German service; by proving that the Doctor, from his entire ignorance of the subject he was writing upon, and of the routine of military hospital service, has allowed himself to be grossly imposed upon, by some malicious designing person (not Lord Granby's secretary) who had no regard to truth, nor wished to do more good to the Doctor's own character, than to the characters of those gentlemen he meant to hurt.

The tables of returns from the British military general hospitals in Germany, as published

lished by Dr. Millar, are fictitious, and perhaps the most unfair and disingenuous that ever blotted paper.

The Doctor's friend, the fabricator of these returns, has put in them the number of sick said to have been sent to the general hospital, and against it, not only all those who died in the general hospital, but all those likewise who died in the regimental hospitals, or in quarters, or were killed by the enemy ; by which means he has made the dead list of the general hospital amount to a great number indeed ; for the number of men who died in the regimental hospitals, and in quarters, exclusive of those who were killed by the enemy, was great ; particularly in winter 1760 and 1761 ; for, on the breaking up of camp in the end of November 1760, the British troops were put into winter quarters in the towns and villages of the bishopricks of Paderborn and Munster, where a putrid malignant fever and dysentery were raging among the poor inhabitants, which soon communicated themselves to the soldiers, and carried off great numbers : as a proof of which, I shall only observe, that the three battalions of guards, who were quartered in Paderborn, lost 69
men

men in their regimental hospitals, in the month of January; the first regiment 36—the second 14—and the third 19—which was a greater number than died in all the general hospitals at Paderborn, from the time of my arrival at that place in January, till the time of my leaving it in April. From the time the regiments left camp, the general hospital received no sick; so that all who were taken ill and died after this time, and till the army again took the field, died in the regimental hospitals.

To prevent its being alledged that I have done the Doctor injustice, in saying that his returns were thus fabricated, I shall here give his own authority, being the copy of what he wrote me in answer to a letter I sent him, begging to know on what authority the returns had been made out, and acquainting him that the returns were erroneous.—Dr. Millar, after refusing to name his author, adds,

“ He foresaw that Dr. Monro was likely
 “ to be misled, by supposing the returns of
 “ dead confined to the hospitals; they con-
 “ tain the whole number, as well in quarters
 “ and in detached parties, as in grand and
 “ flying hospitals; and this he might have

Y 4

“ found

“ found expressly mentioned in the explanation of the tables.” Dated Pall-mall, 17th of April, 1777.

How has the Doctor explained his tables? which are so fabricated, as to make every person on perusing them believe, that the whole dead, there marked, died in the general hospital.

He has mentioned that 800 were killed in the several great actions during the war; and alledged that about 500 died of their wounds. And then he has boldly asserted, that only 2500 were sick in quarters, and in flying and regimental hospitals during the war.

The number said to be killed in great actions, answers nearly to the returns printed in the London Gazettes; but the number must have been much larger; for there is no notice taken in the Gazettes of those who were killed in the many skirmishes that happened during the war;—and as to the number of wounded, I can say nothing, as they were not under my care.

His mentioning that only 2500 men had been in the regimental hospitals shews the grossest ignorance of military affairs.—Had the Doctor been the least acquainted with the routine of military hospitals, or given him-

himself the least trouble to have been informed, he must have known that the number of sick that had been in regimental hospitals, during the war in Germany, must have been at least ten times the number he names ; and for these reasons, the successions of men admitted and discharged from regimental hospitals is quick, and in the time of service, in less than two years, most of the men in a regiment have been on the sick list, and many of them, two, three, or four times. And while in Germany, the general hospital received no sick from the regiments while they were in winter quarters ; and when the army took the field, all the men on being taken ill, were either put into the sick tents in the rear of the regiments, or into houses appropriated for regimental hospitals in the rear, as was the case before the affair of Fillinghausen, in the year 1761 ; and after the affair of Williamsdall, in the year 1762 ; and the sick remained one, two, three, and sometimes more weeks, under the care of the regimental surgeons, before waggons could be got to transport them to the next general hospital, which was commonly twelve or thirteen, and sometimes thirty or forty miles in the rear of the army ; so that scarcely any man

was

was sent to the general who had not been in a regimental hospital before. And as there were often a great many who recovered, or died, in the regimental hospitals before there was an opportunity of sending the sick to the general hospital, and a number of slight cases which did not require to be sent from camp; the number of sick who were in the regimental hospitals during a campaign, was always greater than the number sent to general hospitals.

I wished in this new edition of my Account of the Diseases of the Army, to have given the regular hospital returns of the hospitals I had attended in Germany; which would have shewn the exact number of sick who had been in them, and the number who died; but from the distance of time since the German war, I found that impossible.—I applied at the War-Office, and to Colonel Hotham (now Sir Charles Thomson) who had been adjutant-general in Germany; and to the rev. Mr. Storer *, who had been secretary

* The rev. Mr. Storer was the only secretary lord Granby had while he commanded the British troops in Germany, and that gentleman informed me by letter, that Dr. Millar was an entire stranger to him, and that he had never given him returns of any sort whatever. I had wrote to Mr. Storer to beg the perusal of the German hospital returns, on Dr. Millar's tell.

tary to Lord Granby, but without effect. Neither Colonel Hotham, nor Mr. Storer, had preserved any hospital returns; and I could find no other than the general returns of the army at the War-Office.

I next applied to the late Mr. Cathcart's friends, and got Mr. Sinclair, surgeon to the 2d troop of life-guards, to apply to Mr. Burlton, who had succeeded Mr. Cathcart as director, to have got the perusal of their hospital books; but either these books are destroyed, or the people, in whose possession they are, do not chuse to let them be seen.

From some memorandums which I have accidentally preserved, it should seem that the number of deaths which happened in the general hospital was but small in proportion to the number mentioned in the general returns of the army at all times; particularly at the time of the great mortality, from January to July 1761; but as I cannot name the exact numbers, I shall not mention any, in order to prevent cavil; except one instance, to shew how little we can judge

telling me, on my accidentally meeting him lately, that he had had the returns from Lord Granby's secretary; and the above was Mr. Storer's answer to my letter; adding, that as he had preserved no hospital returns he could not give any to Dr. Millar, or to any other person.

of

of the number of deaths that happen in the general hospital from the monthly returns of the army.

In May 1761, the whole sick of the British general hospitals were collected at Osna-brug, except those of the hospital at Als-field, which was in possession of the French, having been taken on the retreat of the army from the country of Hesse in the end of March; and a few wounded which had been taken at the unfortunate affair of Campen.

The monthly returns of the army make the number of deaths amount to 309; when the whole number that died at Osna-brug did not amount to above 30, by the hospital return sent to Col. Faucet, (now Major General Faucet) for General Conway, who commanded the British troops till Lord Granby arrived from England.

How the number of deaths should be so great for May, and likewise in June this year, I cannot say, not knowing how they were made out; the only way in which I can account for it is thus; that before taking the field the regiments were always more particular in making out their returns than at any other time; in order to ascertain the real strength of the army, that a sufficient number
ber

ber of men might be sent from home to make up the deficiency. And as the deaths cannot be accounted for, by the returns from the general hospital, it is probable, that the regiments had got accounts of the death of many men, who, for want of waggons to transport them, had been left sick scattered up and down the country, on the sudden movement of the army, when they went into the country of Hesse in February; and whom they had dropt at different places on their march, and that many had died in the regimental hospitals; and that probably, the return of the wounded who had been taken at Camper, and of the sick in the hospital at Alsfield, which was in possession of the French, had come to headquarters, in these months.

When I could not get the hospital returns at the War-Office, nor yet any intelligence where they might be found from any of the people I had applied to, I wrote to Captain Douglass at Berwick; who, during the German war, was a captain in the 25th regiment, and being esteemed a good officer, and much afflicted with the gout, which often obliged him to be absent from his regiment, Lord Granby appointed him, in the end of the year 1760, military inspector of the hospitals,

tals, and to take care of the convalescents as they were discharged from them. In answer to my letter he wrote me, that he had copies of all the hospital returns, and other papers relating to the hospitals, but that he had had lately destroyed most of them; as thinking they could never be of farther use, but that he had still preserved some, which might give a little insight into the number of convalescents, or recovered men, sent from the hospitals to him, from the 5th of January 1761, to the end of the war; and he adds, "I am very sure that my old acquaintance
" Dr. Millar's account is most fallacious."

By Captain Douglass's letter to me, dated Berwick, April 24, 1777, and by some memorandums which I shall preserve, it appears that the number of recovered men discharged from the general hospitals from the 5th of January 1761, to the end of the war, amounted to many times the number marked in Dr. Millar's tables.

1761.

Capt. Douglass says, by a letter I wrote to Col. Hotham, of which I have accidentally preserved a copy, I find that from the 5th of January to the 6th of June 1761, I had paid subsistence to 4500 men, all of whom I sent to join their regiments in perfect health,

health, except 180, who were worn-out men, whom I conducted to Bremen on the approach of the enemy to Hervorden, in June 1761.—And I find by other memorandums, that in the following September, when the French made an attempt to surprize Bremen, we had above 700 convalescents fit for duty, whom with some more who had recovered, were sent to join their regiments in the end of November when the troops went into winter-quarters.

Besides those parties mentioned by Capt. Douglass, between 7 and 800 recovered men, whom I discharged from the hospital which was established at Munster in July 1761, went to join the army in August, in two parties; the one of 400 men went directly to join the army; the other followed, and served as a guard to the officers who wanted to join their corps, and to the officers of the hospital and the hospital stores, which were ordered to go to Lemgow, near to which the army then was.

Hence it appears, that at least 6000 recovered men, discharged from the hospitals had been sent to join their respective regiments in the year 1761.—By Dr. Millar's account, only 932 had escaped this year falling victims to diseases and improper management.

In

1762.

In the beginning of the year 1762, a number of officers were sent down from the army to examine, along with the physicians and surgeons, all the men in the hospitals, or who were convalescents who were judged to be rendered unfit for service ; either by age, or by diseases, or by wounds ; in order that they might be sent home, and recruits be sent over to supply their place ; 2 or 300 were judged unfit for farther service, and in about two months afterwards were sent home to England.

In April, Capt. Ker, of the 5th regiment, with some other officers came down to Bremen, to conduct the recovered men to their regiments ; and about 400 men were sent with them to join the army.

In August, between 3 and 400 men were sent to join their respective corps, with Capt. Bilby of the 11th regiment, and some other officers.

In November, Captain Douglass collected all the recovered men at Minden, and sent above 500 to join their regiments.

Hence it appears, that this year above 1200 recovered men were sent from the hospitals to join their regiments ; besides those
who

who had been rendered unfit by wounds or diseases, for duty, who were sent to England; and some hundreds of convalescent and sick men, who were in the hospitals at Osnabrug and Bremen, when the army marched to Holland after the peace was signed; and who came home in the hospital transport-ships from Bremerley, in spring 1763.

By Dr. Millar's account, only 33 men had escaped alive from the hands of the physicians this year.

From what has been said, I think it is evident that the Doctor has been very much imposed on by his secret friend, who, perhaps, may have been one of those clerks about the purveyor, or director's office, who, in the villages of Germany, used to assume to themselves the name of director, and might have been offended at the physician for not paying that respect to their assumed dignity which they wished, and imagined that their own merits and consequence deserved.

Dr. Millar, not contented with having placed such a number of deaths to the account of the general military hospitals in Germany, has, by means of a number of columns, in his tables of returns, cut off near four fifths of the number of deaths that hap-

pened among the poor who came to his dispensary for medicines; and then runs the comparison between the success of the physicians in the hospitals in Germany, and his own in the dispensary he attended.

His two tables of returns for the years 1775 and 1776, are divided into nine columns. From the 22d of August 1774, to September 1, 1775, it appears, that 1207 patients were put on the books; and of these only 13 are marked dead. But on examining the Doctor's own narrative of the 27 patients in next column, marked *Diseases too far advanced*, it appears, that the whole 27 died.—In next column, we find 23 said not likely to receive benefit, of whom, probably, 10 or 12 died.—22 are said to be transferred to hospitals, &c. of whom it is likely four or five may have died—7 are marked irregular, of whom, probably, 2 or 3 died; for if we look into the last article of Dr. Millar's Table of Returns, p. 75, for the year 1776, we find, that some irregulars were prevented from attendance by death.

Hence it should appear, that about 60 patients out of 1207 died, or about 1 in 20, instead of 1 in 110, as marked in his comparative table of p. 34.

And

And upon a like examination of the table for the year 1776, it appears, that about 120 died out of 1346, or about 1 in 11.

As Dr. Millar's professed intention in composing his Observations and Tables, is to lay before the public a fair comparative view of the success attending the medical practice in different charities; I am persuaded that nobody can think I have done him injustice in adding to the dead list of his dispensary, all those patients who appear from his own account to have died after their names were entered on the books of that charity; as every patient whatever sent from the army to the general hospitals in Germany, let their situation be what it would; nay, those who died in waggons in the way to the hospitals, are all counted in the list of their dead; and the physicians had no power of dismissing any as improper, or whose cases were too far advanced to expect relief; nor had they workhouses or hospitals to send those to, whose cases seemed desperate.

Having thus shewn how unfairly both the returns of the British military hospitals in Germany, and Dr. Millar's *Table shewing the Proportion of Deaths to the Number of Sick in different Places*, have been made out, I shall

, now

now take my leave of the Doctor by assuring him, that I do not intend entering into any farther altercation with him, nor mean to answer any thing farther that may be said on this subject; having done all that I proposed, which was to vindicate the physicians, employed on the German service, from the unjust censures and aspersions thrown on them by Dr. Millar's work. The physicians employed on the German service, besides myself, were—Sir Clifton Wintringham—the late Dr. Conyers—Dr. Musket—Dr. Brooke—Dr. Knox—the late Dr. John Armstrong—Dr. Robert Miller,—and the late Dr. Turner.

N. B. Dr. Millar seems to have declared war against all the physicians employed on military service; for in his Observations on his own Practice in the Westminster Dispensary, and in a volume, of which he has made it a part, he has found equal fault with Sir John Pringle and Dr. Huck Saunders; but as I am satisfied that these two gentlemen are well able to answer for themselves, I shall leave them to say what they may think proper on the subject.

T H E E N D.

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